

# TEXTILE BULLETIN

VOL. 65

JANUARY 1, 1944

NO. 9

Seeing  
things  
thru

It is a characteristic of  
American Business  
to finish what it starts.

American Business knows that when war production has truly succeeded the war will end—and with it war production.

To see this thing through requires looking into the post-war period—now. Perhaps then will come the biggest test of all—the test of our American System of Free Competitive Enterprise.

At SONOCO we are planning and preparing for this time. Then, as never before, will our facilities to make anything and everything in textile paper carriers, be important. A dependable source of supply in peace and in war, SONOCO intends to continue into the post-war era.



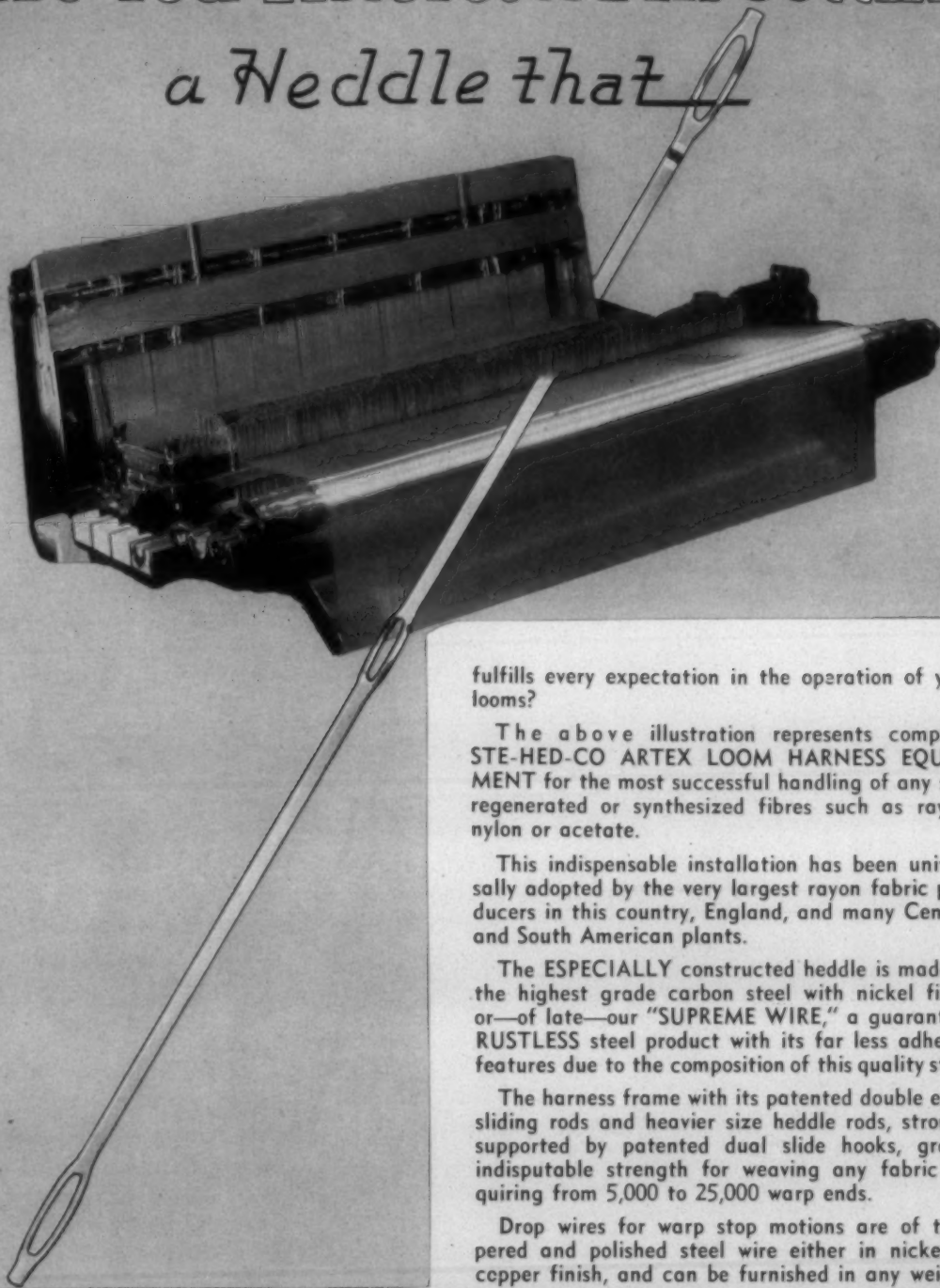
SONOCO MAKES EVERYTHING IN PAPER CARRIERS

**SONOCO PRODUCTS COMPANY**  
HARTSVILLE  
S. C.

DEPENDABLE SOURCE OF SUPPLY

BUY MORE WAR BONDS

# Are You Interested In Getting a Heddle that



fulfills every expectation in the operation of your looms?

The above illustration represents complete STE-HED-CO ARTEX LOOM HARNESS EQUIPMENT for the most successful handling of any size regenerated or synthesized fibres such as rayon, nylon or acetate.

This indispensable installation has been universally adopted by the very largest rayon fabric producers in this country, England, and many Central and South American plants.

The ESPECIALLY constructed heddle is made of the highest grade carbon steel with nickel finish or—of late—our "SUPREME WIRE," a guaranteed RUSTLESS steel product with its far less adhesive features due to the composition of this quality steel.

The harness frame with its patented double ends, sliding rods and heavier size heddle rods, strongly supported by patented dual slide hooks, grants indisputable strength for weaving any fabric requiring from 5,000 to 25,000 warp ends.

Drop wires for warp stop motions are of tempered and polished steel wire either in nickel or copper finish, and can be furnished in any weight.

Buy complete STE-HED-CO ARTEX LOOM HARNESS EQUIPMENT to obtain 100% results.

## STEEL HEDDLE MFG. CO.

BRANCH OFFICES  
ALL OVER  
THE WORLD

Manufacturers of Superior

FLAT STEEL HEDDLES—HARNESS FRAMES—ALL TYPES OF LOOM REEDS—  
TEMPERED DOGWOOD SHUTTLES—LOOM HARNESS ACCESSORIES

2100 W. Allegheny Avenue

Philadelphia, Pa.

FIELD ENGINEERS  
IN  
EVERY DISTRICT

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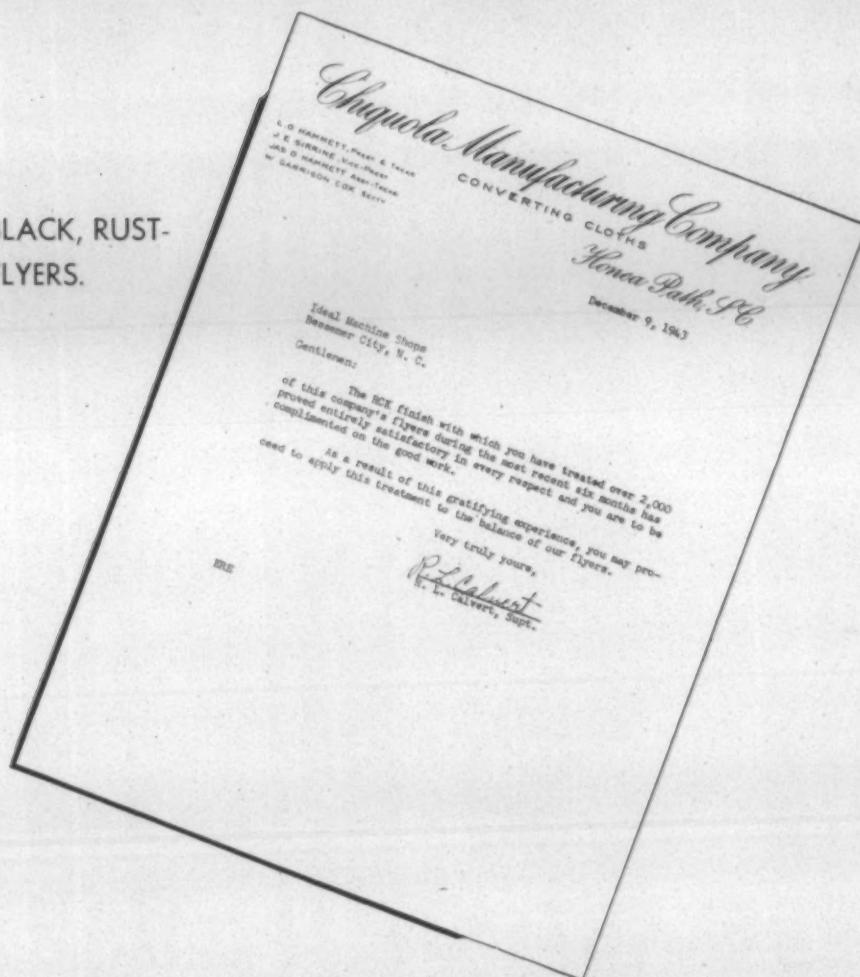
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MR. R. L. CALVERT, Supt. of Chiquola Manufacturing Company . . .

LIKES

# RCK

—A SMOOTH, GLOSSY, BLACK, RUST-RESISTING FINISH FOR FLYERS.



Chiquola Manufacturing Company, Honea Path, S. C., is one of more than one hundred leading mills throughout the South which are having us recondition and RCK-treat their flyers

---

## 150,000 FLYERS FROM MASSACHUSETTS TO TEXAS

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Worn Roving Frame  
Spindles Rebuilt



Flyers Balanced by Our  
Ideal Balancing Machine



Worn Parts Built-up  
By Metallizing

WRITE FOR PARTICULARS

# IDEAL MACHINE SHOPS

BESSEMER CITY, N. C.

20TH YEAR OF CONTINUOUS SERVICE TO THE TEXTILE MILLS





## STARTING JANUARY 18<sup>TH</sup> IT'S UP TO YOU!

**S**TARTING January 18th, it's up to you to lead the men and women working in your plant to do themselves proud by helping to put over the 4th War Loan.

Your Government picks you for this job because you are better fitted than anyone else to know what your employees can and should do—and you're their natural leader. This time, your Government asks your plant to meet a definite quota—and to break it, *plenty!*

*If your plant quota has not yet been set, get in touch now with your State Chairman of the War Finance Committee.*

To meet your plant quota, will mean that you will have to hold your present Pay-Roll Deduction Plan payments at their peak figure—and then get at least an average of one **EXTRA \$100 bond from every worker!**

That's where your leadership comes in—and the lead-

ership of every one of your associates, from plant superintendent to foreman! It's your job to see that your fellow workers are sold the finest investment in the world. To see that they buy their share of tomorrow—of Victory!

That won't prove difficult, if you organize for it. Set up your own campaign right now—and don't aim for anything less than a 100% record in those extra \$100 bonds!

And here's one last thought. Forget you ever heard of "10%" as a measure of a reasonable investment in War Bonds under the Pay-Roll Deduction Plan. Today, thousands of families that formerly depended upon a single wage earner now enjoy the earnings of several. In such cases, 10% or 15% represents but a paltry fraction of an investment which should reach 25%, 50%, or more!

Now then—Up and At Them!

### Keep Backing the Attack!—WITH WAR BONDS

This space contributed to Victory by TEXTILE BULLETIN

*This advertisement prepared under the auspices of the United States Treasury Department and the War Advertising Council*



# *A*nnouncement

We have purchased from Mr. Jacob Ziskind, the goodwill, name, all machine tools and parts, and business of the former T. C. Entwistle Co. of Lowell, Mass.

This plant will be immediately moved to our plant in Gastonia, North Carolina.

We expect to continue the Entwistle line of Warpers, Beamers, etc.

All replacement parts and supplies for Entwistle equipment will be promptly furnished by us from our plant in Gastonia, North Carolina.

We solicit *your* inquiries on either Cocker or Entwistle Warpers.

## **Cocker Machine & Foundry Co.**

GASTONIA, NORTH CAROLINA

*Builders of Complete Warp Preparation Equipment*

**SUCCESSFULLY SERVING  
THE WAR EFFORT...**

# ARKANSAS PRODUCTS

Designed to meet rigid government specifications  
are rendering a distinct service toward  
the ultimate victory...

## MILDEW INHIBITORS

*for various types of cotton cloth and yarn  
non-toxic—non-irritating*

**FUNGICIDE M:** a single product combining a mildew inhibitor and water repellent for producing a mildewproof water repellent finish on insect netting, tapes, sheeting, webbing, thread, etc., in one operation.

**FUNGICIDE PG:** for mildewproofing duck, plied-yarns, etc., by the two bath method.

**AQUAROL\*:** produces a water repellent finish on uniform cloth, overcoatings and other military fabrics ... — may be used in a single bath treatment with Fungicide GM to impart water repellency and mildew resistance to cottons ... — also used in single bath with Arko Fire Retardant to produce water repellency and fire resistance.

**FUNGICIDE GM:** used in conjunction with water repellents in a one bath treatment to mildewproof cottons and impart a water repellent finish.

**FUNGICIDE A:** a mildewproof for cloth coating processes ... — used directly in the vinyl resin solution.

**ARKO FIRE RETARDANT:** for flameproofing uniform cloth, tentage, felts, etc.

**CULOFIX L\*:** used as an after treatment in last rinse to prevent color bleeding in water of direct dyed cotton or rayon.

\* Reg. U.S. Pat. Off.

## ARKANSAS CO. INC., NEWARK, N. J.

Established 40 years



## Penalized for Efficiency

By ERNEST REES, President and Manager, Elk Cotton Mills, Fayetteville, Tenn.

THE cotton textile industry, in spite of what has happened and is happening to it, has shown since Pearl Harbor its ability to answer the Government's call for increased production. Notwithstanding this show of patriotism and its demonstrated ability to meet emergencies, this industry is looked upon with suspicion. It is still regarded as the number one problem of the administration.

Too much control is exercised over it, even in time of war. Management has but little chance.

In the process of continued bureaucratic control the lines are being continually tightened so that today this industry finds itself Prometheus bound. Controlled as it is by WLB, WMC, OPA, etc., with unnecessary floods of directives, with the price of cotton fixed, ceiling prices of yarn set, wages controlled, it has almost reached the point where management is mostly needed to study and work out new directives.

Government taxes in this industry lack but little being confiscatory. Taxes are so high that the law of diminishing returns will set in shortly, if, indeed, it has not already done so. If a mill is fortunate enough to make more than eight per cent on capital, or more than the average pre-war earnings, it then has to pay 90 per cent of this with a promise of ten per cent return after the war. The next tax bill takes 95 per cent of this, with a promise of ten per cent return. On top of all this the administration had to set up a new bureau to renegotiate that part of the mill's business done directly or indirectly with the Government. There may have been some small reason in 1942 for this renegotiation law, but no industry thinks that enough can be gained now to justify it. Little has been gained by it and the result has been to employ a host of people in this bureau to take large amounts from the Treasury to decrease the cost of the Army and Navy purchases. In other words, to take money out of one pocket and put it into another. Surely, there should be no such law, since taxes are sufficiently high to regain all undue profits.

The management of one mill was called before the renegotiation bureau to go over its record of

earnings. This mill showed a pre-war earning of approximately 14 per cent and that it earned 24 per cent on Government contracts in 1942. The contention of the management was that the Government was entitled to only ten per cent of the earnings as a war profit. This was not allowed. The mill in question was allowed less than ten per cent of the earnings, whereas, in any court of equity this mill would have been allowed 14 per cent and the Government ten per cent.

This is not a matter of not being willing to forego profits while the war lasts, but it is most certainly a question of giving efficiency proper credit. Mills dislike being socialized or being punished because they are more watchful of their business and more efficient in the management of their affairs.

From the above it would seem that the cotton textile industry is being penalized for being patriotic. To be penalized for being patriotic is something new under the sun.

When you consider that the textile industry today, surrounded as it is by mismanaged, hostile bureaucracies, is penalized for being patriotic while others are being given incentive payments for producing, you cannot help but feel that the number one problem is being persecuted.

Not long ago a certain bureaucrat was asked if his bureau desired the textile industry to make a reasonable profit, or if the attitude of his bureau was rather to see the industry in the red, his reply was, "I have been out of Washington 24 hours."

The textile industry is now being hounded to such an extent that as a whole, if the bureaus did show any consideration for it, it would have the feeling of the Roman who said, "Timeo Graecos dona ferentes." The industry feels that it is rather in position of the prisoners whom the old vicar addressed, stating to them that they could look to the future with confidence, knowing that Hell could bring to them no change, but that Heaven would mean more to them than others, because the change would be so great.



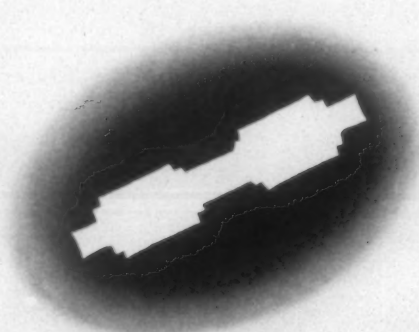
# To confirm the Rumors

## ABOUT A REMARKABLE NEW COT

**I**N the textile industry today, there are a lot of rumors that Armstrong has developed a remarkable new roll covering. We're publishing this statement to tell you the facts.

The rumors say it's a cot made of cork combined with synthetic rubber. That's true. We've been making cork cots for twenty-eight years . . . and Accotex (synthetic rubber) Cots for nine years. We've found that cork drafts better, while synthetic rubber promises a longer service life. So it was only natural that we should develop a cot offering *both* advantages.

The rumors say, further, that some mills are already using our new cot on a limited production basis . . . and that these mills



report it has spinning properties far superior to those of any synthetic roll covering now in general use. That's true also.

If these were normal times, or if we were willing to use one of the less restricted kinds of synthetic rubber, right now we'd be producing cork-and-synthetic-rubber cots by the millions. But there is only one kind of synthetic rubber that does the job right—and, today, most of it is needed in vital war equipment. Hence our current production of the new cots is limited. For this reason, you may not be able to get prompt delivery of as many of them as you would like to have.

Just as soon as these cots become available in unlimited quantities, we will let you know.

## ARMSTRONG CORK COMPANY

TEXTILE PRODUCTS SECTION



LANCASTER, PENNSYLVANIA



## The Quartermaster Is Particular



Weathering racks at the Jeffersonville Quartermaster Depot where samples of various dyed and finished fabrics are subjected to atmospheric conditions. Swatches are tested at certain intervals in laboratories to note the effects of such exposure, with results guiding the Quartermaster in procurement and in writing specifications.

**P**RE-TESTING of duck and canvas cloth and other textile fabrics to evaluate the durability of materials for many Quartermaster products is an important phase in the laboratory experimentation program at the Jeffersonville (Ind.) Quartermaster Depot.

Exposure of samples to weather conditions for periods as long as one year is made to determine the effects of rain, snow, sunshine, dew, etc., so as to obtain the utmost service from military fabrics and fiber products under the varied uses of modern warfare.

Experimentation with untried materials treated for mildewproofing, rot resistance, water repellency, color fastness, etc., and subsequent testing weeds out "weaklings" and inferior products, and assures that nothing but the best goes into Army tentage and a soldier's personal equipment.

With the wide disposition of military forces over the world, a broad range of conditions exists which cannot be met in time by actual field tests alone. In addition to the weathering exposure racks, the engineering laboratories of the Jeffersonville Quartermaster Depot employ scientific machinery to "manufacture" weather simulating Arctic or tropical conditions.

In conducting the exposure tests, samples of various dyed and finished fabrics are attached to a weathering rack, and subjected to atmospheric conditions. Swatches are tested

periodically, chemically and physically, to exposure changes, and these tests may continue from one to 12 months.

When time is of the essence and results must be known as soon as possible, the accelerated weathering units reveal in a few weeks what it takes six months of natural exposure to show. Scientifically controlled, they can duplicate the heat and humidity of the tropics. To get test reactions on Arctic equipment, three different chambers provide complete temperature range.

### A Different Harvest

Samples of Army cloth and fabrics are now planted in greenhouses in the same manner as bulbs and flowers. This seemingly unorthodox procedure is not intended to "raise" textiles as one grows roses and carnations, but rather to test the durability of fabrics, such as canvas and duck which are expected to be used in a damp, humid atmosphere.

Known as the "soil-burial" method, the Jeffersonville Quartermaster Depot was one of the first Army laboratories to adopt this method in testing fabrics for rot-resistance. This method has been accepted as an approved test by the American Society for Testing Materials. In this process, samples receive the same treatment from a landscape gardener as sprouting bulbs, shrubs and plants. They are

periodically sprinkled and kept in a moist, warm atmosphere.

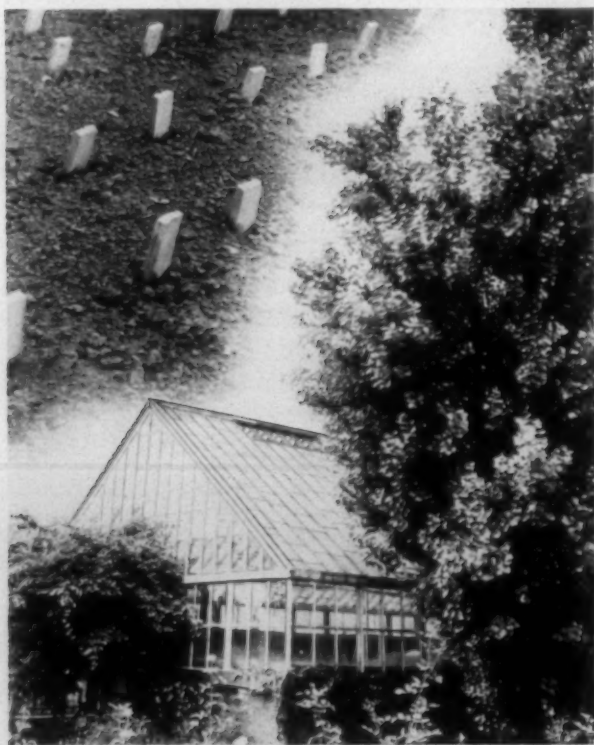
Inasmuch as the "burial" procedure duplicates in a greatly magnified degree the atmospheric and climatic conditions the cloth will have to withstand in actual Army use, this method is especially effective in determining the relative value of various types of preservative finishes with which the cloth is treated.

This process imposes such a severe strain on the fabric that at the end of a week untreated cotton fabric will lose more than 80 per cent of its original tensile strength. Consequently, by running comparative tests on experimental fabric finishes, it can quickly be determined which will afford the best protection against decay for Army tents, rope, webbing, twill, canvas and other types of cloth.

The struggle over mildew is one of the best examples of the speed and efficiency of the Quartermaster research groups. This fabric-eating fungus, bane of housewives everywhere in humid weather, becomes a great destroyer in the fetid jungles where the sun never dries things out. Hammocks, tents, raincoats, insect netting, ropes and leather articles were quickly ruined, it was discovered, and the colors of camouflage materials were altered by the fungus so that they were quickly spotted from the sky.

Now the duck, thread and webbing, before being fabricated into jungle hammocks and a score of other standard items, are soaked in the mildew-repellent as a step in their manufacture. It is even possible to make the fabrics water-repellent and flame-resistant by a single immersion in many strategic materials. Chemical tests are employed by the Jeffersonville Quartermaster Depot laboratories to determine if the inhibitor is present in the amounts required by specification.

While laboratory accelerated mildew (mold) tests (by



Greenhouse graveyard for testing mildew and rot resistance of fabrics by burial in soil at the Jeffersonville Quartermaster Depot. By this accelerated test, technicians of the engineering division judge the ability of a fabric to stand up under warm, humid condition. Wooden pegs identify the buried samples.

stimulating fungus growth in special incubators) are still retained on certain experiments, the soil burial test is being looked upon with more and more favor and is being adopted more generally, reported Elmer C. Bertolet, senior technologist, engineering division, following his return from a symposium of the American Society for Testing Materials.

In the outdoor exposure tests the effect of weathering is sought and is determined by chemical and physical tests performed in the engineering laboratories of the Jeffersonville QM Depot for the purpose of evaluating substitutes in new materials, and to determine conformities to specification of regular procurement materials.

### The Philadelphia Depot

Another of the key installations in the supply system of this country is the Philadelphia (Pa.) Quartermaster Depot, considered during current times as the adopted capital of the textile and clothing industries. *Research and development* are the prime factors at the Philadelphia Quartermaster Depot, which has served this nation continuously for 142 years.

The real picture of the Philadelphia Quartermaster Depot is not in its size, in its buildings, or in the complexity of its basic organization. It is in the unique position which it occupies in the scheme of supply. It is here that is brought to focus the problems that arise in enlisting the textile and apparel industries as units of our war economy. This depot serves as the switchyard between the ground and air forces of the Army, and network and chain of mills, managers, workmen or women, farmers and ranchers. It is here that an important segment of the nation's agriculture, industry and labor first sees concrete evidence of the needs of the Army. Present purchases have affected directly or indirectly the interests of 2,000,000 cotton farmers, 1,200 cotton mills, and thousands of workers in these mills, to say nothing of a similar effect in the woolen, worsted and synthetic textile industries. This is procurement.

What does it mean at the Philadelphia Quartermaster Depot? It is not just buying in the sense that that term is used commercially. Obtaining supplies on the scale as needed by our Army requires such a collection of skills and fund of knowledge as to be an industry in its own right. It requires research technicians, commodity experts, administrators, accountants, lawyers and statisticians, to name just a few. It requires hundreds of trained inspectors, many branch agencies and a complex administrative machinery in order that the thousands of products, when obtained, may be of the quality, type and in the amount needed.

Stroll from one desk to another in the research and development section, and you will see the pattern of tomorrow's clothing and textile equipment for mountain, desert and Arctic warfare; for decorations for meritorious service; for new packing materials and techniques to conserve space on shipboard; for new products to conserve vital strategic materials; in fact, here is the concrete preview in practical manufacturing possibilities, of the pattern of "things to come."

Research and development sets the guide lights; without it procurement is like a ship without a compass. The guide lights of procurement are the specifications for the items to be procured. Inspection sees that these guide lights are kept burning. Specifications, like laws, must either be enforced, or be meaningless. For this reason no research and development organization can be considered apart from the



police force of inspection that backs it up. The force of depot and field inspectors, and laboratory personnel, today numbers over 3,000. This force is constantly being trained to increase its efficiency and technical knowledge.

The work of inspection is to see that every means at its disposal is used to insure that items delivered will comply with the standards established by specifications. For purposes of administration this work is divided into depot inspection, field inspection and laboratory inspection; all are working for a common purpose. In order to help the contractor in every way, tests are being made continually of goods in process so that the items, as completed, will be standard. Careful physical and chemical tests are made on materials used by the contractor in manufacture for the Government. Here are discovered latent and inherent defects, and estimates are made as to the serviceability, probable usefulness and practicability of the finished item. The manufacturer receives detailed reports of all of these tests on raw materials, and of all examinations of sample items selected by the inspector. The manufacturer may, in addition, if he so desires, visit the laboratory and observe the tests, or bring his own technicians who may be performing similar work.

In addition to the plant inspectors stationed in the various contractors' plants, there are advisory inspectors who travel from plant to plant supervising the work of the plant inspectors and offering counsel to the contractors' production employees. As a base of operations for the advisory or supervisory inspectors, there are located in key cities branch offices of the inspection system. Through this network comes a uniformity of policy as to acceptance and rejection that makes for pleasant relationships between this depot and its contractors.

In most cases final inspection and acceptance are not made at contractors' plants; the goods are shipped on Government bills of lading to the nearest depot which has inspection facilities, such as Charlotte, N. C., or Atlanta, Ga., where depot inspection of the goods is performed. The inspection organization at Philadelphia is constantly advising and instructing the inspection personnel at the various depots on the techniques to be used in inspecting items. In general, depot inspection looks for those errors and mistakes in workmanship which are visible to the eye. The laboratory, from samples selected from deliveries, seeks out



A Suter hydrostatic tester tells the story of the water repellency of fabrics before acceptance for service. This is one of the many testing machines in the laboratories of the engineering division at the Jeffersonville Quartermaster Depot.

## NEWS FROM THE "E" FRONT

Atwood Machine Co. of Stonington, Conn., peacetime manufacturer of equipment for the textile industry, has been notified that the company has been awarded a second star for its Army-Navy "E" pennant, originally presented Nov. 14, 1942. Atwood is still busily engaged in the production of material for the armed forces while continuing to give service on repair parts for users of Atwood machines. Most Atwood equipment is employed in the production of textile yarns and materials for the war effort.

Another of the industry's suppliers, S. Blickman, Inc., of Wehawken, N. J., has received this production award. The firm manufactures stainless steel dyeing equipment and other metal products.

Attention should be called to the fact that Newnan (Ga.) Cotton Mills was the country's first yarn mill to receive a star for its "E" flag. The firm's name was unintentionally omitted from the list of Southern textile plants honored for outstanding war production, which was printed in the Dec. 1, 1942, issue of TEXTILE BULLETIN.

The Southern textile industry's most recent "E" winner, Swift Spinning Mills at Columbus, Ga., received its pennant Dec. 29. Pictures and an account of this presentation will be published in the Jan. 15 issue.

those facts concerning the merchandise which cannot be visibly determined.

The Philadelphia Quartermaster Depot buys both materials, and items, and services. In this respect it is unique among procuring agencies. An individual or a buyer for a retailer purchases a finished suit; by so doing he avoids entering into a long series of transactions for buttons, thread, cloth, padding, lining, etc., which finally result in the finished garment. He looks to the manufacturer of the suit to take care of these details. In order to be assured that the basic materials will be of the right shade, strength and quality, and that they will be available when their conversion to coats, trousers and overcoats is desired, the Philadelphia depot enters the primary textile markets for basic cloth and trimmings on a scale never attempted before by any single organization. It then makes contracts by which manufacturers of garments agree to process and fabricate these basic materials and trimmings into finished garments and articles.

Briefly sketched, the purchasing process used is: first, Philadelphia is directed to buy trousers, or overcoats, or socks, or some other item; second, a decision is made as to how these will be procured, whether by direct negotiation, or by informal advertising and negotiation; third, the bids are received and analyzed under the various policies set up by the War Production Board, the Services of Supply and the Quartermaster General's office. After the "Chinese puzzle" of how the awards are to be made has been solved, the contractor is notified of the amount he is to produce.

The actual awarding and administration of the contracts are in the hands of the various contracting officers; guided and controlled by the director of procurement. The Phila-

(Continued on Page 34)

# Two Types of Textile Education—

## New Plans for the Textile School at North Carolina State College

as seen by Dean Malcolm E. Campbell

Recent developments in North Carolina point the way toward increased emphasis on textile education. As indicative of what is expected to be done in the textile school at North Carolina State College, Raleigh, we present a condensation of an address by the school's dean, Malcolm E. Campbell, delivered at last month's Southern Textile Association meeting. Plans for the North Carolina Vocational Textile School, at Belmont, were explained to this school's advisory committee last month by Tilden W. Bridges, the principal. Mr. Bridges, a graduate of the textile school at Raleigh, has prepared a summary of these plans, which will be found on the facing page. A very clear idea of just what action is to be carried out—in college training at Raleigh, and vocational training at Belmont—may be secured by reading what the representatives of these two textile schools have to offer.

WE are now in the process of appraising two basic factors regarding the function of the textile school at North Carolina State College. What are the needs of the textile industry of the state with respect to trained men, and to what extent is the textile school meeting these needs? Balancing the answers to these questions, we can determine the respects in which we are falling short, and lay the necessary plans that we must follow to overcome these deficiencies. If certain courses ought to be given that are not now included, then every effort will be made to see that they are provided for. If we need some items of machinery, apparatus, or other equipment to make the courses most effective, these will be obtained. And if we lack the kind of men to teach the subjects in the best and most effective manner, these men will be found and appointed to our staff. We shall be able to attract qualified, experienced men because of the unprecedented support that is being given to the school by the North Carolina Textile Foundation, Inc., which is making it possible to supplement state-paid salaries to the extent needed to obtain the best possible personnel.

It is my purpose to discuss some of the plans we have in mind that will enable us to furnish the kind of men and women that the industry needs. Let us take stock, first, of the present status of textile school training. Each of the ten textile schools in the United States differs somewhat from the others in character. Some schools are content merely to make their students better card grinders or loom-fixers, or at best, potential overseers and superintendents. Others are seeking to furnish the type of training that will assist their graduates eventually to become managers of textile plants and leaders in the industry. In these schools the greatest emphasis is given to "vocational training"—that is, the teaching of textile technique, or the details of the textile manufacturing processes. It is natural, therefore, that the American schools should have adopted this point of view, and as far as the vocational type of training is concerned, most of them are doing a fairly good job of it.

What should be the objectives of the textile school at North Carolina State College? In consideration of the

character and objectives of the institution of which it is a part, as well as of the stated needs of the textile industry of North Carolina, it is the purpose of the school to train men and women in such a way that after a reasonable period of practical experience in the industry, they will be qualified to manage a textile enterprise and otherwise to assume positions of leadership.

We expect to work closely with the industry of the state, so that we can take into consideration the particular requirements of the mills, and, so far as it is feasible, see that these requirements are fulfilled by our courses of instruction. It is obvious, for example, that what will serve for the fine cotton spinning industry of the state will differ from the type of training needed to equip a man for the rayon weaving industry. As far as possible, all of the major branches will be kept in mind as we develop our plans. At Raleigh, possibly a little more emphasis has been placed on weaving and designing than on other textile subjects—this has been the "character" of the school. Most of the technical work relates to cotton, but now that North Carolina is the number one consuming state as regards rayon, we believe it is advisable to set up a series of strong courses in rayon handling, spinning, weaving and finishing.

There is something to be said in favor of the theory that a person learns by doing; for example, by running a lathe or a milling machine—or a card or loom. On the other hand it seems to me that our purpose should be to provide sufficient training in technique to enable the student to understand the principles of the manufacturing processes and their possibilities and limitations, without spending a lot of valuable time in polishing up a technique that would only fit him to become a good machine operative.

### Fundamentals Come First

It is textile *management* that should be our guiding theme in training textile students at State College. This is going to mean the development of new courses and the consequent reduction in time that heretofore has been spent on "textile technique." There are many ways in which time can be saved in learning the principles of textile manufacturing. By learning thoroughly the *fundamentals* of gearing calculations, drafting, twisting, machine rate of production, the yarn count systems, and so on, the student can apply this knowledge to any of the machines in a mill, and it should not be necessary for him to learn the whole procedure over again for each new process studied. Without going into further detail, it is enough to say that there are many ways in which our courses can and will be streamlined without loss of efficiency. It involves rearranging and simplifying most of them, and reducing the time spent merely in operating spinning frames and looms.

(Continued on Page 32)

# and COLLEGE VOCATIONAL Training

## Proposed Program for the North Carolina Vocational Textile School

as seen by Tilden W. Bridges, Principal

SIX members of the North Carolina Vocational Textile School's advisory committee met Dec. 13 to hear a detailed explanation of proposed plans for operating the Belmont institution.

The program, in short, is to embrace the following general scopes of work: (1) provide basic training for high school students along general textile manufacturing operations, to acquaint such students with the operation and lines of trades possible in such organizations; (2) to provide both theoretical and practical instructions to textile mill employees desiring to increase their knowledge and efficiency; and (3) allied subjects are to be included from time to time as the need for such classes as mill maintenance and other trades becomes apparent.

The program was considered by the following committee members: C. C. Dawson, vice-president of Cramerton Mills; T. P. Morris, assistant manager of manufacturing at Textiles, Inc., Gastonia; W. K. Mauney, executive of several mills at Kings Mountain; Hunter Huss, superintendent of Gaston County schools; R. Dave Hall, secretary and assistant treasurer of Stowe Thread Co., Belmont; and D. R. LeFar, manager of Ranlo Mfg. Co. These men elected Mr. LeFar as their chairman. They were enthusiastic about the proposed program, and willingly accepted the responsibility for reflecting the needs of the textile industry for this type of educational institution. Members unable to attend the meeting were W. M. McLaurine, John Schenck, Jr., C. E. Neisler and B. B. Gossett.

### Two Types of Students

Courses at the vocational school will be offered to two types of students—persons now employed, and high school pupils. This latter group will attend regular high school classes one-half of each day and will be transported to the vocational school for another half-day of study. They will receive full credit toward high school diplomas for work completed at the textile school, while credit given the employed students will be handled by the North Carolina Department of Vocational Education in the same manner as done previously with evening classes elsewhere.

Students still in high school will be subjected to more general work than the employed group. Both will get training needed individually, this allowed by small classes. Two teachers will be used in each department and will operate somewhat as a team, one being a practical man and the other formally trained with mill experience. The man with formal training will head the department, do all classroom instruction in his department and co-ordinate laboratory with class work. The man with practical training will teach machine fixing, care, operation, etc.

The North Carolina Vocational Textile School building at Belmont, which cost just a few cents under \$100,000,

contains six classrooms and a library. There are to be four departments, mill maintenance, yarn manufacturing, weaving and knitting. Emphasis in the well-equipped mill maintenance shop will be on training efficient master mechanics in blueprint reading, shop mathematics, machine tool operation, welding, woodworking and sheet metal work. The course will feature typical jobs which often come up in mills.

The laboratory devoted to yarn manufacturing will be equipped to process cotton from the bale to twisted yarn. To get an idea of how complete the various courses will be, note the following study units contained in yarn manufacturing: cotton sampling and grading, opening and cleaning, picking, cards, sliver lapper, ribbon lapper, combers, drawing, roving frames, spinning, twisting, spooling and warping. These units are broken down into even more specific details.

The weaving laboratory will have both Crompton & Knowles and Draper recent-model looms. In the knitting department circular knitting will be taught for the present, and full-fashioned later.

Daily lesson sheets will be prepared by instructors in each department, since no suitable textbooks are available. In addition to their technical studies, pupils will be subjected to discussions of various elements which are regarded as necessary for the employee's good citizenship standing in the mill community. Strong emphasis will be put on safety in the textile mill. From time to time well-known textile operators or technicians will be asked to discuss the industry as a whole or lecture on some technical problem. An accumulative record will be maintained for each student who attends the school long enough to receive one year's credit. This record will be indicative of the progress made after leaving school, containing such information as who is his employer, what is his job, date of promotions from what to what. These records will serve to evaluate the vocational school program as well as supply a prospective employer with more information than could likely be assembled from any other source.

*(Continued on Page 33)*



The North Carolina Vocational Textile School.



# Indigosol Dyeing of Spun Rayon and Blends of Casein, Wool or Acetate

## Part Fifteen of a Series on Wartime Processing

By ALLISON FITZGERALD

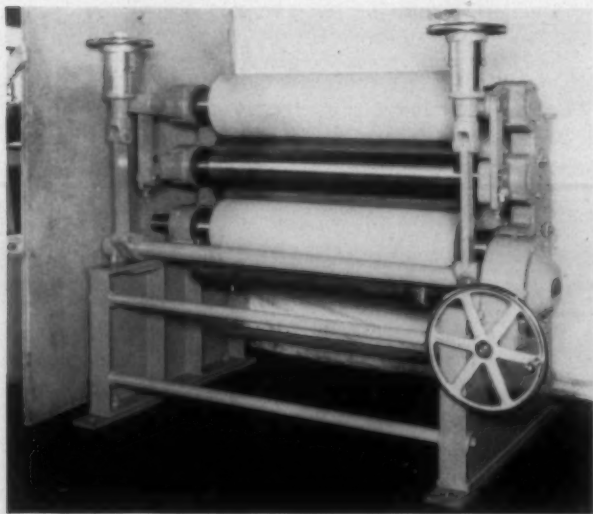
**T**HE most adaptable procedure for handling blends of spun rayon (viscose) constructed with acetate and wool or acetate and casein fibers is to carry out the following set of operations according to the layout of plant equipment:

Prepare gray goods on rolls holding 700 to 1,200 yards according to construction of goods; desize; boil off, bleach and dry; since; apply indigosol colors and dry; apply finish and dry and frame.

This processing outline carries two operations that are optional according to quality of goods and finish wanted by the customer. These two operations are singeing and bleaching; singeing may be omitted entirely on some qualities of goods, but the bleaching operation is carried out to obtain better penetration and levelness of shade, so most dyers and chemists consider bleaching a "must" for a well prepared fabric ready for padding and jigging of the indigosol colors.

Another reason for bleaching of the special blends of goods is that only pastel shades are practical when dyed with indigosols, due to the high cost of colors used. The goods must have a uniformly prepared bottom if the dyed pastels are to be level dyed and free of shadiness.

A desizing mix for reserve tank of 150 gallons is made up of ten to 30 pounds of desizing compound (use agent possessing proteolytic and amylolytic desizing action on sizing compounds), and two pounds of penetrant.



A three-roll dye padder or mangle of the microset type, made by Morrison Machine Co.

Pad at 120 to 150° F., according to maker's recommendation. Batch for two hours before entering on jig or dyebeck for boil-off and bleaching operations. It is considered best to jig these goods, though many plants have found that they can step up production by boiling off and bleaching on dyebeck, but this method tends to give crease marks on some of the finished goods.

In boil-off and bleaching operations on dyebecks for spun rayon-acetate-casein, spun rayon-acetate-wool goods, or spun rayon with casein or wool and acetate omitted, chemicals are used on weight of goods in a 20:1 ratio.

### Mixture for Boil-Off

The boil-off is made up of one per cent borax, bicarbonate of soda or disodium phosphate, and one per cent synthetic detergent. Run at 170° F. for 30 minutes, approximately 6.0 pH. If bleach is not to run, drop bath, rinse, reel off, dry and frame ready for applying indigosols on padder and jig.

The bleach is made up of five per cent hydrogen peroxide (100 volume) and one per cent ammonia. Raise bath to 160° F. for 60 minutes on heavier constructions and less on lightweight goods, drop slowly and give running wash until cold, remove, hydroextract, dry and frame ready for dyeing.

For jig boil-off (60-gallon bath) use three pounds of synthetic detergent, two pounds of bicarbonate of soda, disodium phosphate or borax, and one pound of ammonia (to be added on first and third ends). Local water supply will allow anywhere from 6 to 7 pH. Give four ends at 170° F., crack valves, enter cold water and rinse until clear, batch off through cold water if no bleach is to be given; otherwise, bring up fresh bath ready for bleaching operation.

The 60-gallon bleach bath is made up of ten pounds of 100 volume hydrogen peroxide and one and one-half pounds of ammonia (added on first and third ends). Run four ends at 160° F. for light goods and 175° F. for heavy goods. Use one pound of wetting agent (alkaline resistant) on medium to heavy goods. Drop, cool slowly by cracking valve, bring up fresh bath, heat to 180° F., rinse one end and drop bath slowly, adding cold water, batch goods onto shell through rinse water ready for drying and framing and then dyeing.

The above procedure on the peroxide bleach gives good results on spun rayon-acetate-wool blends but on spun rayon-acetate-casein fiber blends it has been found prefer-

able to give the goods two ends hot rinse at 160° F., then drop and bring up fresh bath. Enter three pounds sodium bisulfite and one pound acetic acid. Run two ends at 140° F., drop and run onto shell through cold water ready for dyeing operation with indigosols.

For handling goods on dyebecks, a continuous dyebeck loader can be used for loading goods for processing on becks and unloading of processed goods. The advantage thereof is that the operatives only have about one-tenth the number of seams to sew as compared to usual operation of sewing a seam for every cut or piece of goods (80 to 100 yards is usual length of cuts). The beamer of gray goods must be very careful in sewing seams for this type of "continuous" operation on a dyebeck, as these seams must stay uniform and be satisfactory for use through desizing, boil-off, bleaching, dyeing operations, finishing, as well as all of the intermittent drying operation required for each wet one.

For handling goods on the padder and jig, see the accompanying illustrations. These machines are representative of the best types for handling of spun rayons as self fabrics and blended with acetate, casein or wool fibers.

In plant practice and recommendations of the color makers it has been found best to use the nitrite process on goods containing no acetate, and where acetate is present, run by the bichromate process.

The nitrite process is slightly objectionable to the operatives in the formation of heavy nitrous fumes when the goods are entering the acid bath; so plant officials must be certain that there are no acetate goods being dyed on nearby jigs during the processing of indigosols. When dyeing goods by the nitrite process, there should be either a ventilator over jigs being operated on this work or special suction and blower fan system carrying off these fumes as they form over the jigs; otherwise they sometimes make operatives temporarily sick. Makers of these colors recommend the addition of 0.3 ounces of urea per gallon to the acid oxidizing bath, as this product retards the rapid formation of nitrous fumes.

### Selecting Indigosol Colors

Careful selection of the proper type of indigosol colors must be based on these properties: affinity for fiber, best padding results at various temperatures and volume of bath, color value of goods padded, dried and developed compared to those padded and developed while wet; and the uniformity of each color in developing at approximately the same rate.

The following colors have proven practical in their application for pastel shades but costs prohibit their use for heavier shades by the pad-jig method: Indigosol Blue IBC, Indigosol Blue IBL, Indigosol Yellow RH, Indigosol Purple AR, Indigosol Brown IBR, Indigosol Red IFBB, Indigosol Olive Green BI, Algosol Blue JBC, Indigosol Grey BL.

For pastel shades, the following general nitrite process padding formula can be adapted for the colors listed: one to three ounces per gallon color, paste up with hot water; add .15 to .5 oz./gal. trisodium phosphate or soda ash; five to 12 oz./gal. gum trag eight per cent strength; two to three quarts cold water, stirred thoroughly; two to three ounces per gallon sodium nitrite (dissolved cold) and stirred five minutes, and entered with two to four oz./gal.

acid-resistant penetrant—Levelene, Triton W-30 or Decersol OT. Make up volume on gallon basis.

The goods are best padded on two or three-roll padder and then batched and developed without drying. It is best to run this nitrite process on a continuous machine with a hot flue dryer, but this article takes up the straight padder and jig method, as most rayon finishing plants are not equipped with a hot flue dryer, although experimental work is now underway with infra-red heating lamps for work of this type; such a drying operation is rather expensive if carried out in open units.

Precaution must be taken that the padded and batched rolls do not stand too long and that they are entered into the acid oxidizing bath as promptly as possible; otherwise uneven development usually occurs through overlong standing.

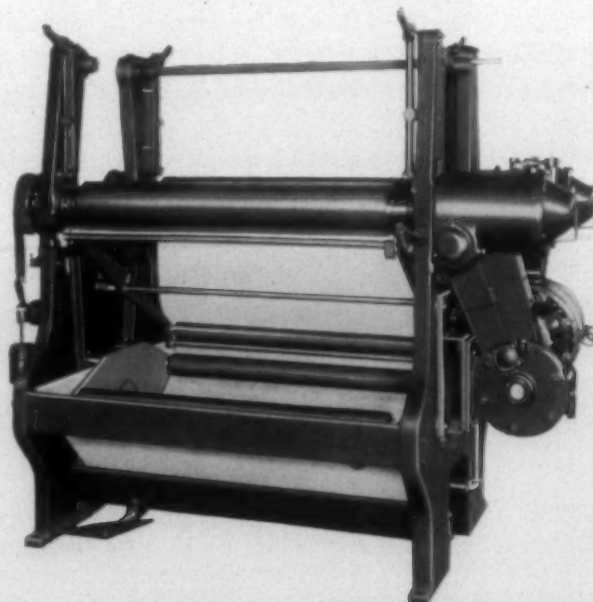
### Jig Oxidation Bath

In the jig oxidation bath of two per cent concentrated commercial sulfuric acid, a reserve tank of three per cent concentrated sulfuric acid is fed into the jig on each fresh roll entered in order to keep up the two per cent strength. Temperature of the oxidation bath is kept between 160° and 175° F.; for best results it must not fall below 150°.

The padded goods are given one end on jig and if squeeze rolls are available are given one run through them before being entered onto a second jig where the goods are "aired" by being run loosely from one roll to the other for one or two ends; this is to assist the oxidation in the absence of a "skying" unit such as available on continuous machine. A fresh bath is entered into jig, rinsed and then neutralized and soaped off at 160-180° F. in bath of 0.50 oz./gal. trisodium phosphate or soda ash and 0.25 oz./gal. soap. Run four ends at 180° F., drop, hot wash at 200° F. for two ends, then batch off ready for drying, applying finish on quetsch, drying and framing.

For the bichromate process (0.75 to 3.0 oz./gal. color) use three qts./gal. hot water pasted up thoroughly, five to 15 oz./gal. gum trag of eight per cent strength, and two to

(Continued on Page 34)



A Morrison Machine Co. dye jig featuring foot lift dump plug and solid stainless steel tub and fittings.

# PRACTICAL TEXTILE DESIGNING

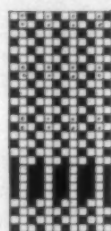
By THOMAS NELSON, Dean Emeritus of the Textile School,  
North Carolina State College, Raleigh

## PART TWENTY-FIVE

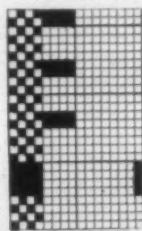
This is another installment of a series on designing by Dr. Nelson, a recognized authority on the subject. His current topic is fancy pique weaves, to be followed in succeeding issues by explanations of double fabric designs in relation to cotton cloths. He will later take up rayon double fabric designs.

**F**ANCY pique figures are made by raising the back threads on to the face of the fabric in different positions according to pattern desired. It must be remembered that when a back thread is raised on to the face of the cloth, if only for a single pick, the cloth is pulled down at that point.

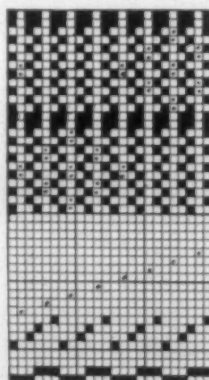
The back threads are generally raised in some systematic order, the design or pattern being made from a motive. A



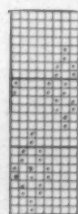
327



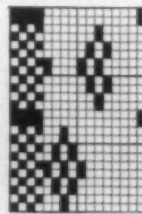
328



330



329



331

motive will therefore represent the manner in which the back threads have to be raised on the face of the fabric, as it is the raising of the back threads on the face of fabric that forms the pattern. The embossed effect in the fabric will be around the motive, the stuffing picks being generally inserted outside the motive, or in such a manner that they will join together and make an embossed effect according to the pattern that is being made.

Fancy piques are also made by combining different widths of wales to form a pattern, as well as by combining regular pique designs with warp pique designs and other fancy effects. Fig. 327 illustrates a design for a fancy pique with different widths of wales, the widest wale having eight

picks face and four stuffing picks, with the narrow wales having no stuffing picks. Fig. 328 is the chain plan. Fig. 329 is a motive for a fancy pique design. Fig. 330 illustrates the design, drawing-in draft and reed plan using this



332-A

motive. Fig. 331 illustrates the chain plan. These fabrics are used for a variety of purposes such as vestings, dress goods, dress shirt fronts, trimmings, etc.

The following examples will illustrate different fancy pique fabrics. Fig. 332-A illustrates a fancy pique fabric made by combining different widths of wales. The design for this fabric is given at Fig. 327. Fig. 332-B shows the reverse of this fabric.

Fig. 332-C illustrates a fancy pique printed summer dress fabric. The design for this fabric is given at Fig. 330 using motive at Fig. 329. Fig. 332-D shows the reverse of this fabric.

Fig. 332-E illustrates a fancy pique fabric which was made in France. Fig. 332-F shows the reverse of this fabric.

Fig. 332-G illustrates another fancy pique fabric which was made in France. Fig. 332-H shows the reverse of this fabric. These French fabrics are heavier than those generally used in America. The reverse side of all these fabrics show clearly how the embossed effect is produced in the fabric.

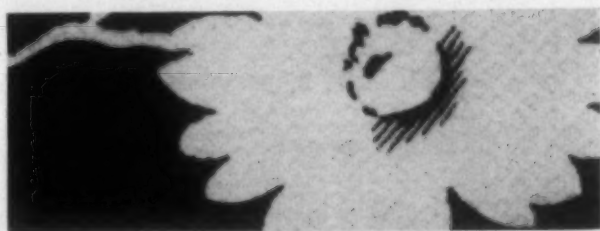


332-B

The style of pattern illustrated at Figs. 332-C and 332-E is often referred to as a "Bird's Eye" effect.

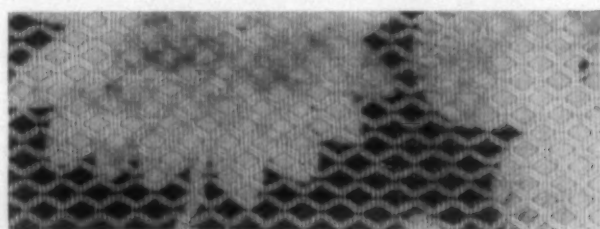


A few points can also be given to assist in making the design from a fancy pique fabric. They are:



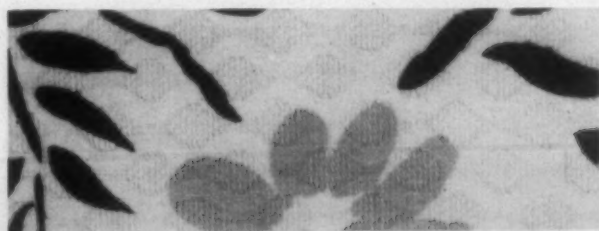
332-C

1. The threads are always arranged two face and one back.
2. The face cloth is woven perfectly plain.
3. The pattern is made by raising the back threads onto the face of the cloth.
4. Notice the manner in which the back threads are raised onto the face of the cloth.
5. Notice how many stuffing picks are inserted.



332-D

Items 1 and 2 are the same as in plain pique fabrics. Referring to items 3 and 4, it will be evident that as the back warp is considerably tighter than the face warp, when a back thread is raised on the fabric, the fabric will be pulled down at the point so that if the back threads are raised in any special order the face will be pulled down in that order. The stuffing picks are inserted so that an embossed effect will be obtained around the point where the back threads are raised on the face of the fabric.



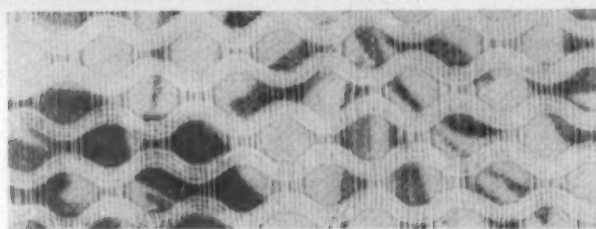
332-E

When inserting a number of stuffing picks, the manner in which they are inserted should be noticed also. Take for example Fig. 332-D. Two stuffing picks are inserted between the sections of the pattern motive. This allows four stuffing picks are inserted between the sections of the pattern motive. This allows four stuffing picks to run together where the threads are floating at the back and makes the embossed effect. In Fig. 332-F four tern motive allowing eight picks to come together.

Some points about selvages are:

1. The selvages on piques are usually made with the threads from the top beam which is woven tight in fabric, or from selvage spools.
2. The selvage threads can be drawn through two separate harness shafts in front of those used for body of the fabric.
3. The selvage threads can be drawn through the harness shafts used for body of fabric.

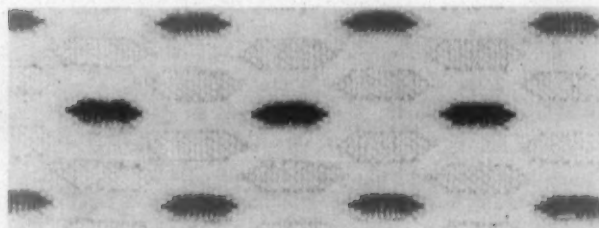
When stuffing filling is not too coarse, this filling can be woven in with the selvage threads. In this case those threads



332-F

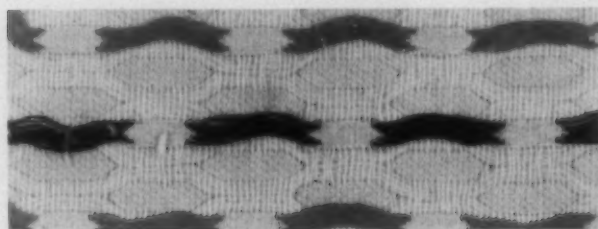
would be drawn through selvage harness shafts as stated in (2) with the shafts weaving plain so as to bind or catch stuffing filling and filling for body of fabric.

If the stuffing filling is coarse and woven in with the selvage threads, and if a plain selvage is used, there will be a tendency for those threads to become tight and break out. To overcome this, the selvage threads can be drawn through the harness shafts as stated in (3). In this case, a catch cord will be used so as to catch the stuffing filling when the



332-G

harness shafts for body of the fabric are raised for stuffing picks to be inserted. This will allow the coarse filling to float under the selvage threads as illustrated in selvage of fabric at Fig. 332-B. The catch word will weave plain all through the fabric. Other methods can be used for selvages such as tape selvage, or having several threads weave as one, or having some threads in selvage float for a few picks and then weave so as to catch the stuffing picks.



332-H

## MILL NEWS

ENOREE, S. C.—The Methodist and Baptist church properties at Enoree have been transferred to their respective congregations by Riverdale Mills, which formerly possessed the deeds.

DANVILLE, VA.—The Danville Chamber of Commerce will honor Riverside & Dan River Cotton Mills, Inc., at a banquet meeting Jan. 28 for the textile firm's contribution to the economic and business welfare of the city. The 15,000 employees of the organization, which runs continuously on cloth orders, took barely more than a day off for Christmas, and a one-day holiday was observed Jan. 1 for inventory purposes.

MARSHALL, N. C.—Marshall Spinning Mills has received a state charter authorizing capital stock amounting to \$52,000. Incorporators are Sheldon M. Roper, W. Henkle Smith and N. M. Rudisill, all of Lincolnton, N. C.

EASLEY, S. C.—Fire of unknown origin slightly damaged some machinery and a small amount of tape at Hudson Narrow Fabric Mills recently. Firemen quickly extinguished the blaze, which began on a Sunday morning.

BARNESVILLE, GA.—A new unit of Aldora Mills, for rayon twisting and rayon and cotton weaving, has been opened and production has begun, according to W. E. Vecsey, manager. The addition steps up production by 40 per cent, it was stated. Another unit, designed to increase production by 60 per cent more, is being constructed, and will be completed about May 1. In the unit already in operation there will be about 4,000 twisting spindles, with 5,000 more to be installed in the additional unit. When the program is finished, there will be 23,000 spindles in operation at the mill. General Tire & Rubber Co. of Akron, Ohio, has operated the mill since 1931. D. D. Quillian is superintendent.

GREENVILLE, S. C.—Employees at Union Bleachery who have been on the company payroll for ten years or more were given a banquet recently, at which they were awarded pins and medals for their service. Seven were recognized for ten years' service, 11 were in the 15-year group, and seven received 20-year medals.

FRONT ROYAL, VA.—A program to eliminate discharge of industrial wastes into the nearby Shenandoah River has been perfected by the chemical and engineering staffs at the Front Royal plant of American Viscose Corp., the company has made known. By means of special equipment all wastes from the plant are so treated and neutralized that the water, according to Warren L. Moody of the Virginia Commission of Game and Inland Fisheries, is "just about neutral or normal." An important factor in the program has been the installation of acid recovery equipment, which prevents the escape of concentrated acids to the river. The cost of the waste disposal program has been approximately \$250,000.

SPINDALE, N. C.—Five textile plants at Spindale, the Elmore Corp., Spindale Mills, Inc., Spinners Processing Co., Sterling Hosiery Mills, Inc., and Stonecutter Mills Co., presented each employee with Christmas gifts parcels containing fruits, nuts and candy.

MCADENVILLE, N. C.—More than 40 operating executives of the McAdenville plant of Stowe Mills, Inc., were presented certificates and diplomas recently for having completed a 96-hour course in industrial safety engineering. A banquet to celebrate the occasion was held at a Charlotte, N. C., hotel. The course was sponsored by the Federal Government and offered through the engineering division of North Carolina State College.

KNOXVILLE, TENN.—The United States Navy Department has given Cherokee Spinning Co. a complete release from renegotiation assessment, stating it did not consider the 8.36 per cent on Government work as involving excessive profit. This was made known in a letter sent by O. R. McGuire, attorney for the Spindale Mills of Spindale, N. C., to the price adjustment board, War Department, Washington. Mr. McGuire quotes A. G. Heinsohn, president, as saying it is a ridiculous situation that the Spindale plant, which is under the same management as Cherokee and which realized the same return on its sales to the Government as Cherokee, has the Army trying to recapture some of this net profit which the Navy approves as not being excessive.

CLEMSON, S. C.—Plans are going forward for the construction of a huge high-tenacity rayon plant near here, representing an investment of \$2,000,000 in the plant itself plus \$1,000,000 for homes and other structures. Approval of the project has been granted by the War Production Board, which is expected to okay the erection of a similar plant elsewhere in the state. Excelsior Mills of Union, S. C., will be in charge of erection and operation of the local plant. It will be a war project, but is to be continued following peace. Output will consist of rayon for use in tires on Army vehicles and planes. Construction was scheduled to begin Jan. 3 by J. E. Serrine & Co., engineers. A one-story plant with 100,000 square feet of floor space and 50 homes for key workers will be built on the 240 acres of land purchased. The mill will be windowless and air-conditioned. Construction will be of brick tile, and fluorescent lighting will be employed inside.

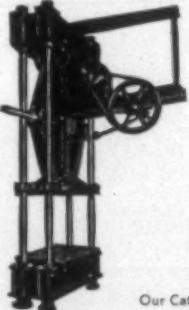
### Giving Credit Where It Is Due

In the Dec. 15, 1943, issue, editors of TEXTILE BULLETIN failed to give proper credit to the firms which furnished information in the article, "Amioca—A New Industrial Starch." Some of the information was furnished by Stein, Hall & Co., while other material, including the pictures used to illustrate this article, was sent to the publishers by National Starch Products, Inc., of New York City.

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## PERSONAL NEWS

Robert A. Morgan has resumed his association with the firm of Moore, Thies & Morgan, textile engineers and specialists and certified public accountants with offices at Charlotte, N. C., and Rome, Ga. Mr. Morgan has returned to Rome from Little Rock, Ark., after spending two years as general manager of an ordnance plant there.

James A. Sullivan has been secured as superintendent of Postex Cotton Mills, Inc., at Post, Tex.

J. F. Davis has resigned as overseer of spinning at the Seneca, S. C., plant of Lonsdale Co. of R. I. to accept a like position at the Monarch plant of Monarch Mills, Union, S. C.

Norman J. Waugh of the Schoolfield, Va., plant of Riverside & Dan River Cotton Mills, Inc., has been designated as Schoolfield's most useful citizen in 1943 by the Young Men's Club of that city. Among his civic duties is that of editing *Contact*, a monthly journal published and sent to all former employees of the plant now in the armed services.

Elliott M. Loyless, formerly with Anniston (Ala.) Mfg. Co., has been promoted by the Army from first lieutenant to captain. He is stationed at Camp Hood, Tex.

Henry H. Rankin, superintendent of South Fork Mfg. Co. at Belmont, N. C., has been appointed a lieutenant (j.g.) in the U. S. Naval Reserve. He is a graduate of the textile school at N. C. State College.

Henry H. Gibson, son of L. B. Gibson, superintendent of the Union-Buffalo Mills Co. plant at Fairmont, S. C., is now an Army lieutenant-colonel stationed at Camp Van Dorn, Miss.

William I. Hudson, a representative of Reeves Bros. and Muscogee Mfg. Co., has been elected president of the Atlanta Textile Club, succeeding William Babcock of Talon, Inc. J. Louis Lynch of Joshua L. Baily & Co. is vice-president, Thomas Osborne of Sterling Textile Co. secretary, and C. A. Peterman of Iselin-Jefferson Co. treasurer.

C. H. Campbell, vice-president in charge of sales for Sonoco Products Co. at Hartsville, S. C., has been appointed by the national War Labor Board as an industry member of the fourth regional War Labor Board which serves the Southeastern states. This board has headquarters at Atlanta, Ga., requiring Mr. Campbell to spend one week out of every five in that city. His appointment is further recognition of his judgment and ability demonstrated during a long record of time and service in public affairs.



C. H. Campbell

J. W. Schenck, secretary of Lily Mills Co., has been elected president of the Shelby (N. C.) Chamber of Commerce. He had previously served for two years as a director of the organization.

Charles F. Goodman, president of American Finishing Co. at Memphis, Tenn., has been named a director of the Memphis Chamber of Commerce.



S. H. Williams

Sumner H. Williams has been appointed manager of the Southern office of General Dyestuff Corp. at Charlotte, N. C., succeeding the late B. A. Stigen. Mr. Williams has been assistant manager of the Charlotte office for a number of years, and is well-qualified to continue as well as extend the services offered by this plant to the Southern textile industry.

Corp. J. A. Sorrels, who before the war was South Carolina representative for New York & New Jersey Lubricant Co., has written the following from Italy to Falls L. Thomason, Southern district manager for the company:

Sure do appreciate your sending me the cigarettes as we are still rationed to four packages per week, when we can get them.

The weather here is terrible. It has rained for the past three weeks (except three days) and the mud is so bad you can hardly wash.

Falls, the people back home don't realize what war is and never will until they go through the experiences we are going through and see what we do. I will gladly come overseas anytime to fight a war rather than have happen to America what is happening over here. God forbid ever having a war fought like this one in America. Knowing what I know now, if I were back in America I would put every cent I could in war bonds for materiel to be used over here.

J. C. Boyce, formerly of Jackson Mills at Iva and Wellford, S. C., is now superintendent of Mayfair Cotton Mills at Arcadia, S. C.

W. M. Pittendreigh has been promoted to superintendent of research at Judson Mills, Greenville, S. C., succeeding his former chief, C. W. Bendigo, who has resigned.

Allan C. Jacobson of J. P. Stevens & Co., William B. Olmstead, Jr., of American Viscose Corp., and John F. Warner of the Calco Chemical Division, American Cyanamid Co., were elected directors of the Textile Color Card Association at the organization's annual meeting last month.

Gene McGarity, a graduate of the textile school at North Carolina State College in 1942, has joined the laboratory staff of Cleveland Cloth Mills at Shelby, N. C.

Frederick Krenson has been appointed editor of the *Bibb Recorder*, house organ published by Bibb Mfg. Co. at Macon, Ga.

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Member of  
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Papers, Inc.

Published Semi-Monthly By

## CLARK PUBLISHING COMPANY

Offices: 218 W. Morehead St., Charlotte, N. C.  
Eastern Address: P. O. Box 133, Providence, R. I.

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Contributions on subjects pertaining to cotton, its manufacture and distribution, are requested. Contributed articles do not necessarily reflect the opinion of the publishers. Items pertaining to new mills, extensions, etc., are solicited.

## Willing to Sacrifice Their Country

The original idea of a strike was that it was a legitimate weapon for laborers whose wages were so low that they could not provide the necessities of life.

It was recognized that there were some employers who would not voluntarily pay decent wages and the public believed that those who worked for such employers had a right to use the strike as a means of obtaining wages which would permit them to obtain adequate food, shelter and clothing for themselves and their families.

No one can seriously claim that, during the present war, coal miners, steel workers, munitions workers or railroad workers are receiving such low wages that they cannot live in comparative comfort.

The War Labor Board held in what is now known as the "Little Steel Formula" that employees were not entitled to increases in wages in excess of the increase in the cost of living, or in other words, that employees were not entitled to benefit by reason of conditions created by the war.

We doubt very much that the coal miners had any idea that it would be necessary for them to seriously disrupt the production of coal and shut down factories engaged in the production of war materials, although they did curtail production and might have been willing to stop the entire output of coal.

They were confident that their leader, John L. Lewis, could browbeat and intimidate Franklin D. Roosevelt and obtain for them advances greater than the advance in the cost of living. They guessed right, for John L. Lewis obtained about everything he demanded.

We have not the slightest doubt that John L. Lewis was personally perfectly willing to disrupt the

mining of coal and shut down every plant producing war materials if his demands had not been granted but he was confident and his followers believed that Franklin D. Roosevelt would do what he dictated.

Seeing what John L. Lewis had obtained for the coal miners, the leaders of the railway workers and the steel workers also decided to obtain for their followers advances in wages in excess of the rise in the cost of living.

They knew that their leaders were not as capable of browbeating Franklin D. Roosevelt as John L. Lewis, but they were willing to use the threat of a shutdown of the steel mills and the railroads in order to force wage advances, and they either have obtained or will obtain most of their demands.

If our newspapers would publish the scale of weekly wages already being paid to railway workers in the United States, the public would get a better idea of the loyalty of those who were apparently willing to shut down our railroads and make impossible the production and shipment of war equipment to men who are getting \$50 per month while fighting and risking their lives so that railroad workers and others in the United States may retain their liberty and continue their way of life.

The armed forces of the United States, Great Britain and Russia have been doing magnificent work and the Germans have recently shown such evidences of depression that there were many of our leaders who believed that they would crack rather than go through the hardships of this winter.

Now there appears to be a new feeling of optimism in Germany because they have seen the willingness of the coal miners, the steel workers and the railway employees of the United States to disrupt our production of war materials unless they could profit by the war, that is, be given wage advances greater than the advance in the cost of living.

The people of Germany have undoubtedly been given renewed hope and it may be that their determination has been stiffened enough to carry them through the winter and make possible a long summer and fall campaign of resistance.

There is no doubt about the ultimate defeat of Germany and very little doubt about her defeat some time during 1944, but there are many who believe that the threats of the coal miners and the steel and railway workers have prolonged the war by giving encouragement to the people of Germany and that many thousands of our finest young men will be killed in battles which would not be fought but for the encouragement given to Germany by our labor unions.

President Roosevelt created a War Labor Board with authority to determine the justification for wage advances and that organization, although made up of men known to be exceedingly friendly to organized labor, adopted the "Little Steel Formula" as the point beyond which wage advances should not go.



The "Little Steel Formula," like many other formulas, could not be all-inclusive. Two elements which were not included were the ability of John L. Lewis to browbeat Franklin D. Roosevelt, and the fact that it was formed so early in 1942 that it could not take into account the fourth term aspirations of President Roosevelt and his unwillingness to offend those who claim to control large blocks of votes.

By subterfuge the "Little Steel Formula" has been by-passed and no longer exists except in name.

Organized labor may rave and rant against those who charge that it has given encouragement and new hope to Germany, but where is there a country whose people would not become optimistic when it heard that the coal miners and the steel and railway workers in the enemy country had announced that they would strike and stop the production of war materials unless their wage demands were met.

## Selected

From the many Christmas cards received, all of which were deeply appreciated, we have selected this as the most expressive:

THROUGH PROSPERITY AND PEACE—THROUGH ADVERSITY AND WAR, WE HAVE ALWAYS ENJOYED GREETING OUR FRIENDS AT CHRISTMAS TIME AND SO AGAIN WE SEND GREETINGS WITH THE HOPE THAT YOUR FUTURE WILL ALWAYS BE BRIGHT WITH THE LIGHT OF LIBERTY AND BROAD IN THE FREEDOMS AS WE KNOW THEM SO THAT YOU MAY ENJOY ALL THE FINE THINGS THAT FREEDOM BRINGS.

THOUGH THE EARTH ROCK, THESE THINGS MUST NEVER CHANGE—LIBERTY—FREEDOM—THE SPIRIT OF CHRISTMAS.

WHITINSVILLE SPINNING RING COMPANY

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## Seats for Employees

We had the pleasure of attending the Army-Navy "E" award to the Swift Spinning Mills of Columbus, Ga., on December 29th, but due to our inability to have the photographs processed in time for this issue the account will not be published until January 15th.

One nice feature of the award to the Swift Spinning Mills was that seats were provided for all employees whereas in most cases the employees have had to stand during the ceremonies, which usually require one hour plus preliminary time.

The Swift Spinning Mills had secured some second grade lumber and carpenters knocked together some plain but substantial benches for the convenience of the employees and they were not under the strain of having to stand upon their feet for more than an hour.

## Head of Division for Revision

As head of the Division of Provision for Revision

Was a man of prompt decision—Morton Quirk.

Ph.D. in Calisthenics, PDQ in Pathogenics,

He had just the proper background for the work.

From the pastoral aroma of Aloma, Oklahoma,

With a pittance of a salary in hand,

His acceptance had been whetted, even aided and abetted

By emolument that netted some five grand.

So, with energy ecstatic, this fanatic left his attic

And hastened on to Washington, D. C.,

Where with verve and vim and vigor, he went hunting for the Nigger

In the woodpile of the W. P. B.

After months of patient process, Morton's spicular proboscis

Had unearthed a reprehensible hiatus

In reply by Blair and Blair to his thirteenth questionnaire

In connection with their inventory status.

They had written—"Your directive when effective was defective

In its ultimate objective—and what's more

Neolithic hieroglyphic is, to us, much more specific

Than the drivel you keep dumping at our door."

This sacrilege discovered, Morton fainted—but recovered

Sufficiently to write, "We are convinced

That sabotage is camouflage behind perverted persiflage—

Expect me on the 22nd inst."

But first he sent a checker, then he sent a checker's checker—

Still nothing was disclosed as being wrong.

So a checker's checker came to check the checker's checker

And the process was laborious and long.

Then followed a procession of the follow-up profession

Through the records of the firm of Blair and Blair.

From breakfast until supper some new super-follow-upper

Tore his hair because of Morton's questionnaire.

\* \* \* \* \*

The file is closed, completed, and our Hero, undefeated,

Carries on in some department as before;

And Vict'ry is in sight of—not because of—but in spite of Doctor Morton's mighty efforts in the war.

—Author Unknown.

## North Carolina Textile Foundation

The close of the year 1943 found the North Carolina Textile Foundation, Inc., with \$481,750 paid in and about \$25,000 additional pledged.

The Foundation was organized in December, 1942, for the improvement and enlargement of textile education in North Carolina and during 1943 made substantial progress toward its goal of \$600,000.

While we do not have the figures for the J. E. Sirrine Textile Foundation and the Textile Education Foundation which were organized in South Carolina and Georgia for similar purposes, we understand that they have made as good or even better progress than the North Carolina Textile Foundation.



## "World Standard" Testing Equipment

\*Scott Testers are made in all capacities from single hair to 2,000 lbs. for tensile, burst, flexing, crepeage, hysteresis, etc. Machine shown at left is Model J-2 for skein or single end yarn testing.

**SCOTT  
TESTERS**

\*Registered  
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\*Scott Testers accomplish tests by methods having recognition as Standard by governments, laboratory services and Societies the world around. In fact, Scott testing methods often form the basis for the standards as written. 60 models for tensile, hysteresis, flexing, crepeage, twist, etc., from single hair to 1 ton.

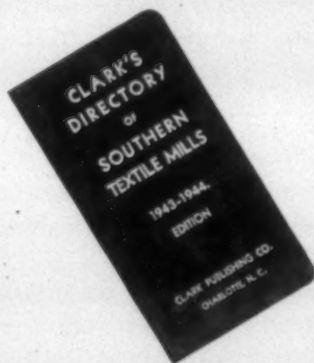
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Gives capital, number of machines, officers, buyers, superintendents, kind of power used, product and telephone number of every Southern Textile Mill. Also contains "Hints for Traveling Men."

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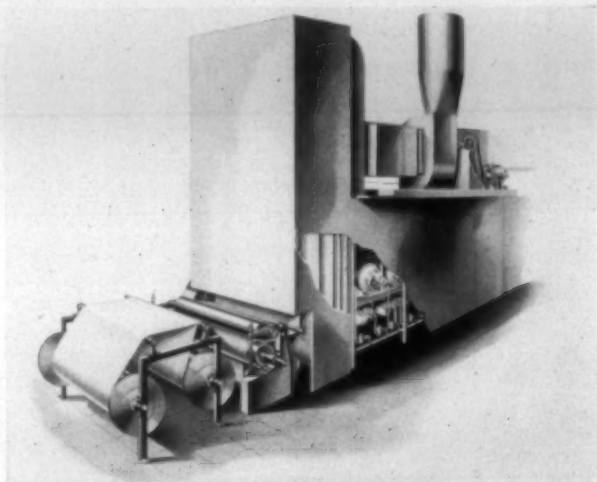
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MACHINE WORKS**  
MANUFACTURERS OF  
**TEXTILE MACHINERY  
PARTS**

GASTONIA,

NORTH CAROLINA

## Machine for Impregnating Rubber in Cord Is Developed

H. W. Butterworth & Sons Co., based on experience with finishing ranges in the textile industry, has designed and built a continuous process range to impregnate rayon tire cord with latex rubber solution.



Designed and built by H. W. Butterworth & Sons Co., this new improved continuous process range for impregnating tire cord with latex solution is being used on military tires.

One of America's largest tire manufacturers has been operating this machine at a speed better than 25 yards a minute. Another advantage found is that it assures a valuable saving of floor space.

The installation uses the padding technique of immersion in latex, squeezing between rollers and drying on cans, taking care that the solution is so adjusted to the pick-up that the proper amount of latex impregnates the rayon cord.

The range begins with the feeding of the rayon cord into a two-roll micro-set padder with constant tension let-off to insure necessary stretch. After the squeeze under four thousand pounds pressure, the cord passes through a heated flue. The pre-drying speeds up the whole process.

Next the cord passes over a series of 28 steam-heated drying cans. These cans are arranged vertically with split drive to control tension while being dried. The cord is wound onto a constant tension winder at the end of the range.

All of the rayon cord being impregnated on this continuous process range is used for military purposes, particularly aircraft tires where rayon is said to save some four pounds of rubber per tire, runs cooler and withstands the shock of high-speed landings.

## Care of Picker Sticks Promoted by Jacobs

E. H. Jacobs Mfg. Corp. of Charlotte, N. C., and Danielson, Conn., is currently furnishing to the textile industry a series of convenient bulletin cards entitled "Helpful Suggestions to Mill Men."

The first of these cards deals with the proper care of picker sticks, and contains the following hints on this subject:

"Keep your picker sticks in original cartons until actually needed. Lay cartons flat on shelves or benches. Store in



room of consistently moderate temperature. Inspect every stick before attaching to loom (see first illustration).

"Note: Any good live stick is subject to warpage when exposed to humid and hot atmosphere, or exposed to damp floors in supply room. If a stick is only slightly warped it can be straightened as shown by (second) picture and as follows:

"(1) Insert in 2x6 slot cut in loom fixer's bench. Apply sufficient pressure at warped end to straighten. (2) This is also sufficient test for durability of stick."





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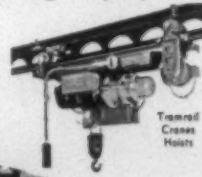
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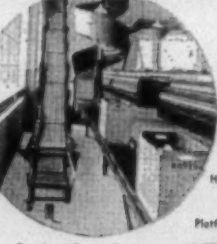
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## War Production Board Revises Production and Distribution Orders

Cotton yarns and fabrics were the subject Dec. 24 of further War Production Board action, expressed by amendments to Orders L-99 and M-317, and the revocation of Orders L-99-a, M-134 and M-207. The action is intended to have far-reaching effect in improving the distribution and facilitating production of those essential items.

The amendments to Order M-317 are designed to provide for a proportionate distribution of all preference rated business. The order, as amended, embodies two types of schedules. The first grants preference ratings of AA-1, AA-2X, AA-4 and AA-5, respectively, to be used in the procurement of various cotton textiles required for specified products or purposes. The second group contains distribution schedules.

Amendments to Order L-99 add a new Schedule C, which controls looms on all plain print cloths of 80 sley or more and tobacco and bandage cloths. A new Schedule D is added which replaces the spindle control of Order L-99-a with a less stringent regulation of these spindles engaged in the production of sale yarn, twines, etc.

In Order M-317, as now amended, the AA-1 Preference Rating Schedule covers yarn, twine and tire cord only. The AA-2X Preference Rating Schedule is similar in content to the original AA-3 schedule as issued on Aug. 16, 1943. It has been extended, however, to include yarns and twines as well as fabrics, and several additional end uses, the most important of which is surgical dressings, heretofore covered in Order M-134, and now revoked. The AA-4 Preference Rating Schedule is, for the most part, a replacement of Order M-207, covering work clothing, although such items as footwear, diapers and sanitary napkins are also included. The AA-5 Preference Rating Schedule covers hospital equipment, book binding cloths, artificial leather and coated fabrics, and various laundry and dry cleaning supplies.

The distribution schedules cover cotton yarns, cordage and twines; fine cotton goods; and carded gray goods, colored yarn and napped fabrics and specialties. Each producer of the various items of cotton textiles listed in these schedules is required to deliver a minimum percentage of his production in each calendar quarter against rated export orders. Similarly, the minimum percentage which must be delivered against all rated orders, export and domestic, is specified for each fabric or item and a percentage is fixed beyond which no producer is obliged to accept rated orders.

Each of the textiles in the distribution schedules are keyed to their corresponding item numbers on the WPB 658 forms which are filed quarterly by cotton mills. This presents a very clear tie-up as Order L-99, which governs the production, also is keyed to the item numbers on these reports. Some of the principal effects of the new order are:

1. The governmental export agencies, such as OEW, OLLA, OFRRO, together with the Dominion of Canada,

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**BURKART-SCHIER CHEMICAL CO.**

CHATTANOOGA, TENN.

are guaranteed for the first quarter of the year a percentage of the production commensurate with the quantities which the requirements committee of the WPB has decided may be exported. Based upon the most conservative estimates of production, the total yardage thus made available is approximately seven per cent of the total.

2. The undue burden of rated business of all kinds which certain concerns heretofore were required to bear will be corrected. It is pointed out, for example, that 35 per cent of the 1945 production of a standard fabric, well known to the tire trade, has been sold against preference rated orders. The different mills which make this fabric, however, have varied in their annual sales on rated orders from approximately ten per cent to 90 per cent of their respective production totals.

3. Many buyers who have tended to concentrate their rated purchases with relatively few mills in such heavy quantities that the mills have been unable to take care of their reasonable share of normal unrated civilian business, will be obliged to distribute their rated purchases on a broader basis. Since all mills alike must accept a minimum share of rated orders, it is expected that unrated, as well as rated, production will be distributed more evenly. The uneven distribution of unrated business has caused competitive inequities at wholesale and retail levels as well as relative shortages in certain sections of the country.

4. The position of vertical organizations is very clearly set forth so that every producer of cotton textiles, even though he also uses those textiles in some other department or departments of his business, is obliged to observe the inventory restrictions of the order, use the ratings assigned in the order and accept rated orders on the same basis as though he was conducting two or more separate businesses, such as the manufacture of gray broadcloths, the conversion of these into bleached or dyed shirtings and the manufacture of the shirtings into men's shirts.

5. Approximately 67 per cent of the yardage of woven cotton textiles will be sold under preference ratings. Similarly, about 72 per cent of the poundage of sale yarn, twine and cordage including tire cords will be rated.

### J. W. Ivey Joins Moreland Chemical

J. W. Ivey of Charlotte, N. C., who has been with Mathieson Alkali Works for the past 15 years, has resigned his position with that company to accept a position as manager of the heavy chemicals division of Moreland Chemical Co. at Spartanburg, S. C.



J. W. Ivey

Moreland Chemical Co., of which Paul C. Thomas is president, manufactures sizings, soaps and finishing products and distributes a complete line of textile and industrial chemicals.

Upon completion of his education at Georgia Tech, Mr. Ivey was connected with Dixie Mercerizing Co. at Chattanooga, Tenn., for two years. He entered the employ of Mathieson Alkali as a member of the sales department, but for the past few years has devoted his entire time to technical research and the development of new products particularly applicable to the textile industry.

He is secretary and treasurer of the Carolinas section of the American Chemical Society.

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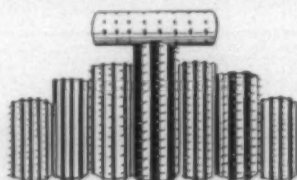
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CARDER, SPINNER and Superintendent desires to change; above draft age, married, experienced, carded and combed cotton. Experienced all staples, yarns, plain, fancy cotton weave; available now. Strength and quality a specialty. References. Location and shift no preference. Address "Box 449," c/o Textile Bulletin.

SECOND HAND in Spinning wants job. Prefers a second shift in North Carolina or South Carolina. Can handle carding. For references and interview write "H-S," c/o Textile Bulletin.

EXPERIENCED Mill Superintendent or Overseer of Weaving open for position on plain or box looms with dobby weaves. Above draft age. Would like to come for interview. Address "Box 118-R, H," c/o Textile Bulletin.

SUPERINTENDENT Available for new connection in very near future. Fully experienced in manufacturing, purchasing and personnel. Have a most creditable record for producing results over a period of several years. Salary secondary. Acceptable references. If interested, address Box "B-R," c/o Textile Bulletin.

WANTED—Position by overseer spinning. Married; draft status 3-H. Age, 42. Strictly sober. 15 years' experience. Now employed. Have good reason for changing. Can furnish A-1 references. Address R. C., c/o Textile Bulletin.

POSITION WANTED—As overseer spinning. 25 years' experience on long and short draft. Good references; married; draft status, 3-A. Not employed. Address J. L. C., c/o Textile Bulletin.

WANTED—Position as Overseer of Carding or Spinning. Can furnish good references. Address replies to "Box 475," c/o Textile Bulletin.

TIRE FABRIC EXPERT, now employed, would consider change to better position. 42 years of age; married; energetic and efficient. Have a record of several years' successful experience in all phases of both Cotton and Rayon Tire Fabric Manufacturing. Can furnish best of references as to character and ability. Address D. P. W., c/o Textile Bulletin.

POSITION WANTED—As second hand carding or overseer in small mill. 15 years' experience in carding. Now second hand in 40,000-spindle mill. Married; two children. References. Address B. W., c/o Textile Bulletin.

WANTED—Position as Overseer of Spooler Room. Would consider second hand or overhauling job in large room if chance for advancement. 38 years of age; have had 11 years' experience as spooler room foreman with Barber-Colman high speed warpers and automatic spoolers. Employed at present but want change to larger room. Address "Spooler," c/o Textile Bulletin.

SUPERINTENDENT or Overseer of Weaving, 46 years of age. Now employed as superintendent. Good reason for making a change. 25 years' practical experience in all departments of cotton manufacturing, both colored and plain. Some textile school background. Know textile cost accounting. Prefer South or Southeast. References furnished. Address Box "M-437," c/o Textile Bulletin.

## Specialists



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Sweepers using Perfex Fibre Brooms are those who FIRST used them LONG ENOUGH to become acquainted with their easy sweep. Try 1 or 100 from

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- 2—Woonsocket 12 x 6 x 72 Spindle Slubbers.
- 1—Saco-Lowell Bronze Rotary Size Pump.
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- 15—S-L Dry Tape Drive Ring Twisters, 3" ga., 216 sp. ea.
- 12—Draper Automatic Model L Looms, 86 1/2" Reed Space.
- 1—Belger Roving Tester.
- 1—Scott Yarn Tester.
- 1—Scott Cloth Tester, also Single Strand Tester.

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A nationally recognized manufacturer of textile chemical specialties has an opening for a district sales representative for the states of Georgia, Alabama and Tennessee. Textile school graduate with mill experience preferred. The position offers unusual opportunities. Salary and bonus arrangement. Write fully of experience, references, family and draft status. All replies will be held in strict confidence. Our organization knows of this advertisement.

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• Firms having textile mill equipment for sale also find Textile Bulletin classified advertisements valuable in establishing business contacts.

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### NEISLER MILLS CO., Inc.

*Selling Agents*

66-68 WORTH STREET, NEW YORK

### ISELIN-JEFFERSON COMPANY

90 WORTH STREET, NEW YORK CITY

■ ■ ■

We will welcome the opportunity to discuss  
your problems of merchandising and distribution

## Cotton Goods Market

NEW YORK.—Most important topics for discussion in the gray goods market during recent days have been the War Production Board's revised regulations L-99 and M-317. Concentrated study has been put to the task of adjusting operations to comply with these orders.

Agreement has been general on the point that the new regulations will equalize the amount of business that all mills must take in respect to Government priorities and that the unbalance that previously existed would be eradicated. That the adjustment whereby some mills would have to take more priority business and others less in the months to come would mean a change in procedure from that of the past and cause some inconvenience, was admitted. During the time that selling agencies and mills are making these adjustments, it is expected that not much business will be negotiated.

In most quarters it was felt that the amount of goods that this regulation would provide for civilian uses would not show much change and if anything would mean less, since many fabrics received maximum priority ratings acceptable of 100 per cent. In the past, it was pointed out, mills were able to circumvent priorities and able to pass along small supplies to regular customers; now mills would be compelled to take on this business when pressed by holders of priorities.

The greatest benefit out of the new M-317 will accrue to the export business, it was stated in most places. This will settle once and for all the controversial question as to supplying cloth for export. Not much success had been registered up until now by exporters in getting supplies, but with the regulation listing specific quantities for export, this problem should be eased.

The question has been raised as to who should get the seven per cent export premium—heretofore many mills sold to export houses and declined to take on such business, despite heavy requests for goods. Now it is quite likely that many mills will attempt to go after this trade themselves, and the view was expressed that the shipments to Canada should show a sharp rise, leading to an oversupply in comparison with the export certificates issued.

Actual trading recently in the Worth Street market was restricted and the seasonal slow-up of activity was evident in practically all divisions of the gray goods market. About the only transactions of note put through were some deals involving Government contracts and priority rated orders, and even here the volume was considerably under that of any of the few preceding weeks.

The pre-holiday spirit was apparent throughout the market and with many buyers absent there was a marked let-up in the pressure for goods.

### J. P. STEVENS & CO., Inc. *fabrics for diversified uses*

1410 BROADWAY 44 LEONARD STREET

EMPIRE STATE BUILDING

NEW YORK

# Cotton Yarns Market

PHILADELPHIA.—Recent market estimates and reports by spinners seem to indicate a stabilization of cotton yarn production at a level which can be expected to be maintained during the first quarter of this year, that is if there are no harmful changes in the conditions under which most yarn mills are operating.

Some observers see a better manpower situation in this first quarter. However, yarn mill labor costs have been expected to rise, and unless this can be remedied by increased ceiling prices, income for spinners will certainly be lowered. In December there was a modest gain in the number of operating combed yarn spindles. Indications toward the last of the month were that spinners would finish the year with less than five weeks' unfilled orders, or less than half of their order backlog of that date in 1942.

Combed sale yarn has not been an open-market commodity during the past few months because of the large percentage of the total production going into war orders and highly essential civilian products. Observers say that this condition can be expected to last at least until February.

As compared with the liberal average net earnings of 1940-1941-1942, income of cotton yarn spinners and distributors during the 1943 period (in part subject to renegotiation) has been estimated to average below the 1936-1937-1938-1939 base period selected by the Office of Economic Stabilization as the criterion for granting such ceiling price adjustments as the OPA is said to be preparing to make. Inventory profits which accrued to the yarn industry earlier in the war period raised the profits to a level substantially above the 1936-1939 basis, but such profits can be taken only once and inauguration of OPA price control put an end to it.

Normally, a considerable part of the yarn disposed of for general commercial purposes is produced by the integrated mills. In the war economy, the proportion of such yarn produced by strictly sale yarn mills has increased, and these sources necessarily are confined to what they can earn from their yarn manufacturing and selling operations. Their profits, when there are any, depend entirely on the "spread" between their net costs (after deducting taxes and all other charges) and the prices they can obtain.

The regulations and controls of wartime have borne down more heavily on these producers than on the integrated mills, and textile leaders have advocated recognition of this in the granting of individual price adjustments, particularly as the so-called "marginal" yarn production is now more urgently needed than at any previous time during the war.

## J. W. Valentine & Co., Inc.

**Selling Agents**

40 Worth St.

New York City

+++

Southern Representative

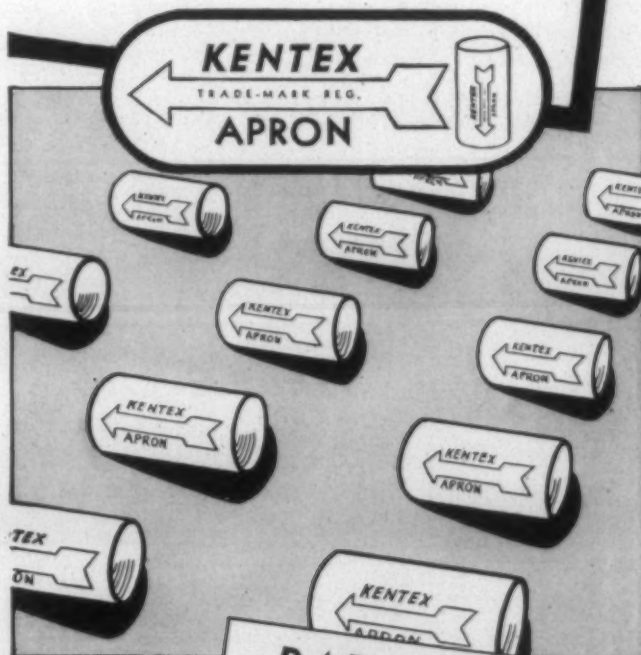
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612 S. Main St.

Winston-Salem, N. C.

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Kentex aprons are *precision* built by experienced craftsmen—in a new plant, with modern machinery largely of our own design. They are gauge-tested for uniformity at every point; not only for uniformity with other aprons in the same shipment, but for uniformity with previous shipments, or with your specifications. That's why KENTEX aprons fit better!



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Write for Prices and free samples of KENTEX precision-built aprons.

# TEXTILE APRON COMPANY

EAST POINT, GEORGIA

J. B. KENNINGTON, OWNER



## New Plans for the Textile School At N. C. State College

(Continued from Page 12)

Let us consider now some of the essential subjects that should be included in an up-to-date series of courses in textile management. First, there is the question of raw materials, such as cotton, staple rayon, rayon yarns and the like. Although it is a fact that cotton mills can earn or lose large sums of money merely by purchasing the right or wrong quality of cotton, in the majority of cases cotton is still selected on the basis of guess, tradition or rule-of-thumb. The time has come when the selection of cotton on a scientific basis is a practical matter, and students of textile management who expect to enter the cotton industry should be fully acquainted with the possibilities. In the field of synthetics, there are now many kinds of fibers available. The student should know what they are, what physical and chemical properties they possess, how they may be used, and where these materials can be obtained. Similarly, in the case of rayon yarns, we must see that complete and up-to-date information on the various types of yarns is grasped by every student who plans to follow the rayon weaving or knitting industries.

A person trained in textile management needs to know not only how to determine manufacturing costs in every department of his mill, but how quickly and accurately to determine savings or losses that might result from proposed changes in procedure. This knowledge can be obtained by learning sound fundamentals of textile costing and how to apply them.

How to handle personnel, problems of labor relations, and Federal and state laws and regulations concerning labor are among the most important subjects needed by a potential mill manager, and rightly should be taught under the heading of personnel management as a part of the group of subjects involved in textile management. Heretofore an otherwise well-trained graduate of a textile school or other college has been left entirely to his own resources when it

came to labor problems. Our plans call for adequate courses in personnel management for textile students.

There is also a distinct need for a complete course in merchandising and marketing for men and women who plan to enter the field of distribution. Merchandising has been defined as the styling, preparation and scheduling of textiles, whereas marketing relates to all of the factors that are involved in selling the product, including the determination of costs, the development of sales organizations, the setting of prices and so on. The whole subject involves training in a combination of textile manufacturing, business administration and applied economics, each of which includes a number of specialized courses. Because styling and designing comprise such a specialized field, provision ought to be made for training those who are artistically inclined and wish to take up this phase of textiles as their life work.

### Importance of Research

As many of you know, the subject of textile research is now being given a tremendous impetus throughout the country. A number of organizations are now planning intensive research in the field of textiles, some of which will involve fundamental, and others, applied research. Besides these, numerous industrial firms are establishing large-scale textile research programs. Without any question, all of this is going to bring on a great demand for men and women who are specially trained and qualified to conduct research in textiles. If the textile schools of the country are to meet their responsibility in furnishing young men and women with adequate training for the field of research, it is not too soon to plan for special college courses in this kind of work. There is ample material for at least two years of specialized undergraduate work, and where it can be offered, from one to three years of graduate work in preparing a student for textile research.

Students taking the courses in textile manufacturing and textile management also should have at least some acquaintance with research. They ought to know of the kind of

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

# Weave for ictory with

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*"The Weaver's Friend"*

### THE KEEVER STARCH CO., COLUMBUS, OHIO

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GREENVILLE, S. C.

**L. J. CASTILE**  
CHARLOTTE, N. C.

research that is being conducted over the country, how it can be applied to their own work, and how to obtain and understand research reports. Likewise, they should receive instruction and practice in fiber, yarn and fabric testing. Finally, they should learn how to set up and conduct tests and research projects in commercial plants, so that the mills with which they become associated can work out their own technical problems on a sound basis.

Although the primary function of the textile school is that of training young men and women for the industry, an important secondary function is that of conducting research. Because of the excellent facilities for conducting applied research at the textile school of North Carolina State College, it is our plan to use our equipment to the greatest possible extent in working on research problems and tests of interest to the textile manufacturers of the state. We are now making plans for the enlargement of our testing laboratories, and will equip them with the latest types of precision air-conditioning equipment, and testing instruments and apparatus of all kinds for studying cotton and rayon fibers, yarns and fabrics.

Recently we added to our staff a man (G. H. Dunlap, formerly of Clemson College and the Cotton-Textile Institute, Inc.) with practical experience in textiles, whose duties will involve frequent visits to the mills of the state, in order to bring the school closer to the industry. He will help mills with their technical problems, aid in setting up tests within plants, and make tests at the school's laboratories. In the near future we hope to add a knitting specialist to help the knitting plants with their problems.

Plans are now under way to establish a textile library at the school, with a trained librarian in charge. This library, as is the case with all of our facilities and personnel, will be at the service of the textile manufacturers of North Carolina.

That the textile industry of this state is willing and eager to hold up its end of the bargain is effectively demonstrated by the fine support of the North Carolina Textile Foundation. It is now up to the school to see that the hopes of the officers and members of this foundation are put into action.

## The North Carolina Vocational Textile School

(Continued from Page 13)

The North Carolina Vocational School had its origin when the state's 1941 General Assembly allotted \$50,000, matching a like sum contributed by Gaston County textile firms. The Stowe and Lineberger interests at Belmont donated land for the institution, and the Federal Government provided \$32,000 to purchase machine shop equipment. The North Carolina General Assembly this year appropriated another \$75,000 for equipment and operating expenses during 1943 and 1944. Salaries for staff members come from funds of the North Carolina Department of Vocational Education, which is subsidized by the Federal Office of Education.

M. L. Rhodes, superintendent of the school, is also assistant state supervisor of trade and industrial education. His chief experience during the past 20 years has been directing the North Carolina evening school program.

## MOGUL METALLIZING SOLVES MAINTENANCE PROBLEMS

Your machine parts are wearing out faster than ever before under grueling war-time production schedules. Your replacements mean costly delays. You are also finding that many of your machine parts can't be had for love nor money!

That's where Mogul Metallizing fits in—rebuilds worn and discarded parts at a fraction of their original cost—with a minimum loss of time. Many textile parts can be metallized without dismantling of machines.

That Mogul Metallizing is a tried and proven process is shown by the fact that scores of textile mills are using Mogul Metallizing today to build up worn spindles, drawing rolls, sand rolls on looms, loom crankshafts, size pump impeller shafts, spinning frame rolls, let-up rolls on looms and squeeze roll shafts. And, new uses for this miracle metal spray process are being found daily.

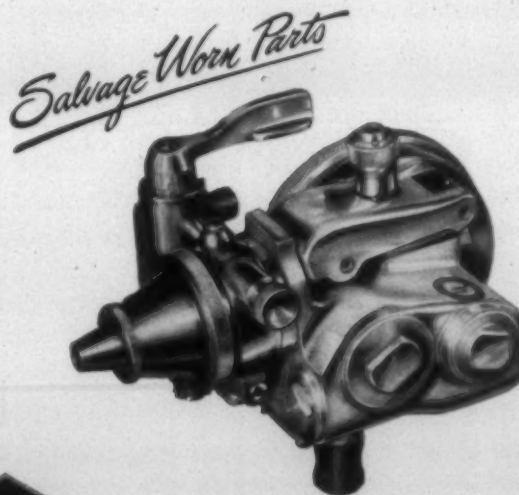
No textile mill can afford to be without Mogul Metallizing equipment in times like these. It will pay you dividends to get the time and money-saving facts today!

Copy of the new 36-page Mogul Metallizing Process and Equipment Catalog is yours for the asking. A veritable encyclopedia of techniques and practices, classified by industry. Reserve your copy right away.

### METALLIZING COMPANY OF AMERICA

Executive Offices: 1330 Congress St., Chicago, Ill.

Southern Offices: E. J. Ferring, 901 William-Oliver Bldg., Atlanta 3, Georgia. E. M. Kay, 120 Brevard Ct., Charlotte 2, North Carolina



**MOGUL**

The Mogul Model P Metallizing Gun is the most perfectly engineered unit available today. Its performance cannot be equaled. Fewer parts guarantee years of life and trouble-free high speed operation.

## COTTON MILL WASTE

RAYON WASTE

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Get Our Prices

- We buy spot lots or contracts
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## VICTOR SERVICE ENGINEERING on the JOB . . .



### 5 Extra Pounds per Doff with the right Victor Traveler

A northern worsted mill, running 1/14s on ring spinning frames, found that production was much better (85 lbs. per doff, and 1 soft bobbin per 100) when the travelers were worn and needed replacement than when they were new (80 lbs. per doff, and 20 soft bobbins per 100).

After consulting with Victor Service Engineers, it was decided to use a Victor flat wire traveler instead of the round wire style then in use. This provided uniform tension throughout the life of the traveler, and the higher production was steadily maintained.

When such traveler questions arise, the answer depends on many conditions, which are rarely alike in different mills, even when the work being run is apparently the same. A Victor Service Engineer has the experience necessary to help you add up all these conditions, and your answer will be the right traveler for better production, better quality. Why not talk over the jobs that are giving you trouble? Write, wire, or call . . .

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173 W. Franklin Ave.  
Tel. 247



**VICTOR**  
Ring Travelers

## Indigosol Dyeing of Spun Rayon and Blends of Casein, Wool or Acetate

(Continued from Page 15)

four oz./gal. acid resistant penetrant. Make up volume on gallon basis. Pad, batch and develop without drying.

In the developing bath operation use 1.5 to 3.0 oz./gal. bichromate of soda dissolved in three and one-half quarts of water; then add 80 to 160 c.c. of concentrated sulfuric acid. Make to gallon volume with cold water, strength of bath depending on depth of shade, whether very light or full. Run one end on pad or jig at 100° F., then enter onto second jig and finish up as on nitrite process.

The finishes applied on these goods are based chiefly on retaining the characteristic of the "wooly" hand created by the use of casein fiber or wool fibers, so care must be used in keeping to the minimum number of operations and time required in processing as well as checking all baths for maintenance of the correct pH so as to prevent harmful action on these fibers; otherwise, the finished goods lose that desirable hand wanted.

On the more expensive fabrics, development work has been carried on toward the use of various resins to give the non-creasing and permanent finish; these when correctly applied give a pleasing hand on this finished fabric.

## The Quartermaster Is Particular

(Continued from Page 11)

delphia depot buys over 2,000 different items of textile products; however, these products are divided into categories which allow a contracting officer to deal with a phase of the textile and apparel industries.

One would think that the fact that most of the items procured by this depot are of a commercial nature would ease the burden; in many respects the opposite has been the truth. Here was a field in which various conflicting social and business philosophies could compete without interfering with the war effort. It has not been so much a case of developing productive capacity as it has been in distributing the available orders to existing facilities. This has in turn raised such problems as might not otherwise exist, such as geographical distribution, emphasis on awards to smaller war plants, ceiling prices, relief of labor surplus areas and denying of awards to labor shortage areas. Each factor in the plethora of rules and policies must be evaluated in relation to all others. There is no dominating consideration other than the necessity to secure the goods in the time allowed.

## Elliott Heads Alabama Association

At a meeting of the board of directors of the Alabama Cotton Manufacturers Association Dec. 17, George S. Elliott, vice-president of the group, was elevated to the presidency to fill the unexpired term caused by the death of D. H. Morris, Jr. Mr. Elliott is secretary and treasurer of Dallas Mfg. Co. at Huntsville, Ala.

J. T. Phillips, treasurer, was elected vice-president as well as treasurer. He is president and treasurer of Buck Creek Cotton Mills at Siluria, Ala. The terms of these officers will expire in April of this year, at which time new executives will be elected at the association's annual meeting.



## OBITUARY

### A. B. COBB, SR.

A. B. Cobb, Sr., superintendent of Gambrill & Melville Mills Co. at Bessemer City, N. C., died recently at the age of 75 in a Charlotte, N. C., hospital. He had been ill approximately one week. Services and burial took place at Kings Mountain, N. C. Survivors include his wife, four sons and three daughters.

### LEON SEIGNER

Leon Seigner, 65, secretary and superintendent of Culpepper (Va.) Textile Mills Co., died recently at his home. Last rites were held at Englewood, N. J. Surviving are his widow, a son and a daughter.

### L. W. CUDDY

Louis William Cuddy, 74, a well-known textile official prior to his retirement several years ago, died recently at Charlotte, N. C., following a sudden heart attack. Mr. Cuddy spent his early life and began his career in New England, later coming South to be superintendent of Gambrill & Melville Mills Co. at Bessemer City, N. C., and Anson Mfg. Co. at Wadesboro, N. C. He operated a cork roller shop after leaving the textile manufacturing business.

### C. G. BRAMLETT, SR.

C. G. Bramlett, Sr., 63, overseer of carding at W. A. Handley Mfg. Co., Roanoke, Ala., died recently at his home. He had been with the company for 31 years.

### J. M. KELLY

James M. Kelly, 64, died of a heart attack at his home in Thomaston, Ga., Dec. 22. Mr. Kelly, formerly of Gastonia and Rhodhiss, N. C., had been associated with Thomaston Cotton Mills for the past eight years. He is survived by his wife, four sons, eight grandchildren and one great-grandchild.

### DR. J. S. FONDA

Dr. John Sutliff Fonda, 42, assistant director of sales, Grasselli chemicals department of E. I. du Pont de Nemours & Co., died Dec. 22 at Wilmington, Del., of a heart attack following complications contracted from pneumonia. During his life Dr. Fonda made many important contributions to the field of rayon research. He is survived by his wife, a daughter and three sisters.

### E. B. KERST

Edgar B. Kerst of the sales department of Proctor & Schwartz, Inc., died last month at his home in Philadelphia. He had been associated with his firm for 35 years.

### J. F. LOWE

John Franklin Lowe, 71, well-known traveling textile machinist for Whitin Machine Works, died Dec. 28 at his Belmont, N. C., home. His wife, four sons, two daughters, two sisters, a brother and four grandchildren survive.



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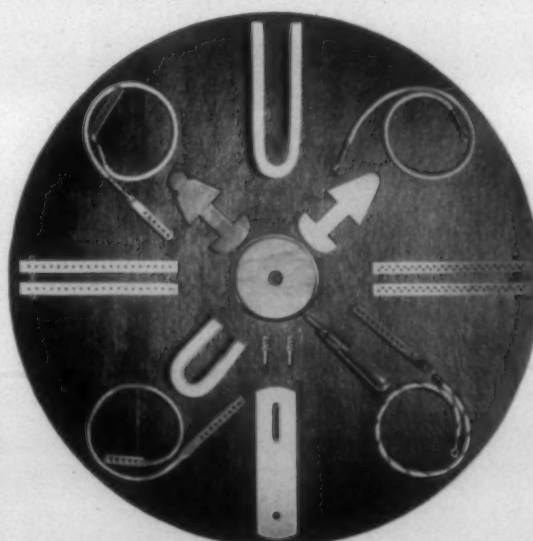


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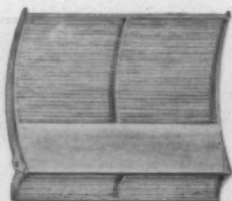
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## Dayton Rubber Receives Award for Work in Synthetic Rubber

The Dayton Rubber Mfg. Co. of Dayton, Ohio, recently received the highly coveted 1943 award for chemical engineering achievement, in recognition of its outstanding contribution to the design, construction and operation of the American synthetic rubber program. This notable award is made only every two years for meritorious accomplishment in the field of chemical engineering.

The Copolymer Corp. of Baton Rouge, La., of which Dayton Rubber is a joint operator, received a like award. The Copolymer plant was the first dual-unit type installation to go into operation under the Government program, and is today one of the country's largest producers of Buna-S synthetic rubber. A. L. Freedlander, widely known for his research work on synthetic rubber products, is president of both concerns.

The awards were made by a committee of 52 chemical engineers and university professors. The presentations were made by Alfred H. White, chairman of the committee of award and professor emeritus of chemical engineering, University of Michigan, at a dinner held at the Waldorf-Astoria Hotel, New York City.

Long before the present global war, Dayton Rubber was one of the original pioneers in synthetic rubber. In 1934, Dayton Rubber made the first all-synthetic rubber tires in America, an achievement that was hailed from coast to coast because it proved that the nation's wheels could be kept rolling, regardless of what happened to the natural rubber plantations of the East Indies. The same year Dayton Rubber introduced synthetic rubber printing rollers to the printing industry, and in 1938 Dayton placed a line of synthetic rubber textile machinery parts on the market.

## Whelchel Heads South Central A. A. T. C. C.

Homer Whelchel of Central Franklin Process Co. was elected chairman for 1944 of the South Central section of the American Association of Textile Chemists and Colorists at a recent meeting at Chattanooga, Tenn.

Mr. Whelchel was named to succeed Jack Anderson of the Peerless Woolen Mills, Rossville, Ga. The ticket of new officers, as presented by Walter Hadley of Standard-Coosa-Thatcher Co., chairman of the nominating committee, was elected. Others elected were: J. A. Crumley of the Hosiery Processing Co., vice-chairman; W. K. Newman of Peerless Woolen Mills, treasurer; R. W. Freeze of American Aniline Products Co., secretary; and Jack Anderson of Peerless Woolen Mills, councillor.

J. A. Crumley read the section's paper on "Processing of Acetate Rayon Hosiery" that was presented in the competition held recently in New York by the national association. The paper was discussed at length by the section members. The meeting, the last of the year, was held in the form of a dinner at the Read House. Fifty persons attended.

The executive committee of the American Society for Testing Materials will hold its spring meeting at Cincinnati, Ohio, Feb. 28 through March 3. The technical feature of this meeting will be a symposium on application and uses of synthetic rubber. The society's 47th annual meeting will be held at New York June 26-30.

## Rayon Production During 1943 Shows Gain Over Previous Year

United States production of rayon in 1943 totaled approximately 660,000,000 pounds, representing a four per cent gain over 1942 output and establishing a new production record for the industry, according to William C. Appleton, president of American Viscose Corp. Output in 1942 amounted to 633,000,000 pounds and in 1941 to 573,000,000 pounds. Production has more than doubled in the past five years, the output in 1938 having totaled 288,000,000 pounds.

Rayon's versatility and ability to fill many varied needs was demonstrated during the year by its use in many types of military equipment and in a broad range of civilian applications. The principal military uses included extra-strength tire cord and tire fabrics, parachutes for fragmentation or anti-personnel bombs, cargo and supply parachutes, uniform linings and self-sealing gasoline tanks.

A major development of the year just past was commencement of the large-scale program for expanded output of rayon tire cord yarn ordered by the War Production Board. This program calls for production to be increased to a level of 240,000,000 pounds annually. The program was initiated to provide sufficient rayon tire cord for the manufacture of tires for our military aircraft, armored cars, heavy guns, Army trucks and other motorized equipment, and also for the manufacture of the new synthetic rubber tires. These tires generate more heat than those made with natural rubber. Rayon tire cords possess exceptional ability to resist such heat and to retain their strength under heat, and are regarded as indispensable to the successful carrying out of the nation's synthetic rubber tire program.

Under the provision of the State Department's good neighbor policy, designed to increase economic collaboration and good will between the two Americas, United States rayon producers, as in 1942, set aside each month a specified amount of their production for export to the Latin American countries.

War demand for rayon affected the hosiery situation by absorbing the extra-strength viscose rayon yarns for tire cords, parachutes and self-sealing gasoline tanks. Certain types of these yarns had been developed specifically for use in hosiery. Their application in this field must now wait until after the war is over. Meanwhile, although standard rayon yarns are being used, the quality of rayon stockings was very greatly improved during the year.

In the civilian field rayon provided a large proportion of the country's essential clothing requirements. Surveys show that considerably more than one-half of all women's dresses sold today are made of rayon and the fiber is being used on an increasing scale in fabrics designed for men's wear.

The increasing versatility of rayon, demonstrated in 1943 by its important war-time applications, will make the fiber of wider usefulness in times of peace. Now, however, the industry must devote its accumulated skill and experience to helping win the war at the earliest possible date.

Eleven million yards of cotton sheetings—in white, light blue, pink and lavender—have been requested by the Treasury Department for shipment to French North Africa. Charged to the account of Lend Lease, this one order will consume approximately 7,134 bales of American-produced raw cotton.

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**ACME STEEL CO.**, 2838 Archer Ave., Chicago, Ill. Sou. Office and Warehouse, 608 Stewart Ave., S.W., Atlanta, Ga. F. H. Webb, Dist. Mgr. Sou. Sales Reps.: C. A. Carrell, 523 Clairmont Ave., Decatur, Ga.; Phone Dearborn 6267; K. J. Pedersen, 301 W. 10th St. (Tel. 2-2903), Charlotte, N. C.; William G. Polley, 937 Cherokee Lane, Signal Mountain, Tenn.; Phone Chattanooga 8-2635; John C. Brill, 309 Magazine St., New Orleans, La. Phone Magnolia 5859. Warehouses at Atlanta, Ga., Greenville, S. C., New Orleans, La.

**AKRON BELTING CO., THE**, Akron, O. Sou. Reps.: Ralph Gossett and Wm. J. Moore, 15 Augusta St., Greenville, S. C.; The Akron Belting Co., 406 S. 2nd St., Memphis, Tenn.

**ALLEN CO.**, 440 River Road, New Bedford, Mass. Sou. Repr.: L. E. Wooten, Fort Mill, S. C.

**AMERICAN BLOWER CORP.**, P. O. Box 58, Roosevelt Park Annex, Detroit, Mich.; 7 N. 6th St., Richmond, Va.; 1211 Commercial Bank Bldg., Charlotte, N. C.; Room 714, 101 Marietta St. Bldg., Atlanta, Ga.; Room 309, Jahnecke Bldg., 816 Howard Ave., New Orleans, La.; 619 Texas Bank Bldg., Dallas, Tex.; 312 Keller Bldg., Houston, Tex.

**AMERICAN CYANAMID & CHEMICAL CORP.**, 30 Rockefeller Plaza, New York City. Sou. Office and Warehouse, Wilkinson Blvd., Charlotte, N. C.; Hugh Puckett, Sou. Sales Mgr. Reps.: John D. Hunter, E. H. Driver, Paul F. Haddock, Charlotte Office; E. J. Adams, 1404 S. 22nd St., Birmingham, Ala.; Jack B. Button, 610 N. Mendenhall St., Greensboro, N. C.; C. B. Suttle, Jr., 423 Clairmont Ave., Decatur, Ga.; K. E. Youngchild, 10 South St., Mobile, Ala.

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**AMERICAN VISCOSE CO.**, 350 Fifth Ave., New York City. Sou. Office, Johnston Bldg., Charlotte, N. C., Harry L. Dalton, Mgr.

**ARKANSAS CO., Inc.**, P. O. Box 210, Newark, N. J. Sou. Repr.: Jasper M. Brown, 1204 Greenwood Cliff, Charlotte, N. C.

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**ATWOOD MACHINE CO.**, Stonington, Conn. Sou. Rep.: Fred Salls, Johnston Bldg., Charlotte, N. C.

**AUFFMORDT & CO., C. A.**, 408 Fourth Ave., New York City.

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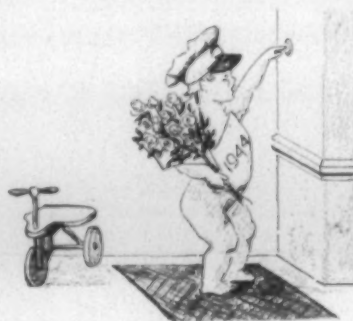
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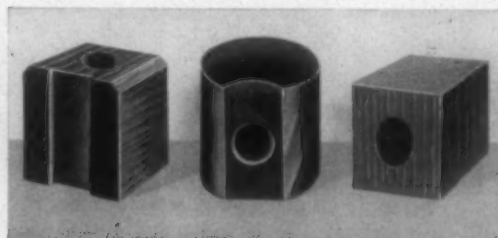
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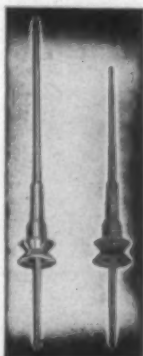
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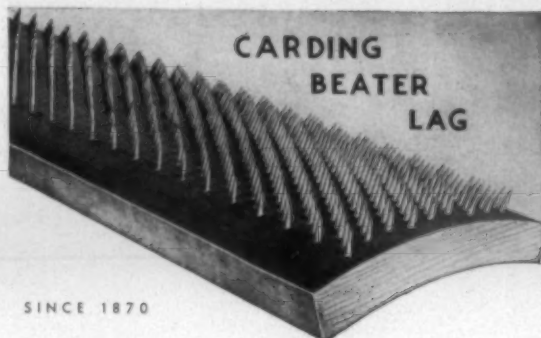
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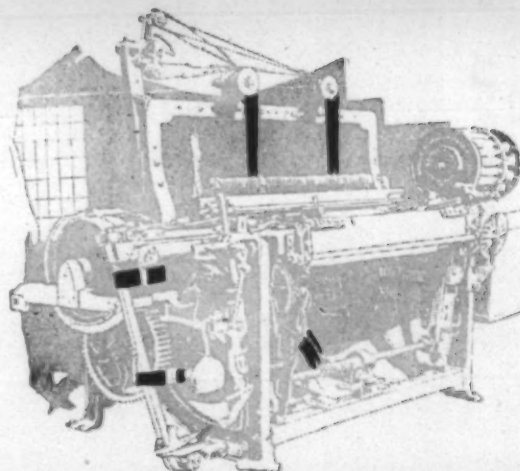
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REG. U. S. PAT. OFF.

## TEXTILE LEATHERS



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### Cut Your Loom Leather Costs In Half!

Taken individually, Textile Leathers are comparatively inexpensive items. However, when the costs of all the leathers used during the past several years are added up, and losses of time due to stoppages for replacements, cost of broken picker sticks caused by poor lugs, etc., are figured in, the total is large.

If you could cut this total IN HALF—simply by switching to "BONDARON" Leathers—wouldn't you do it?

They are only slightly higher priced than ordinary leathers, yet they consistently wear from 3 to 5 times longer. Send us a trial order today and prove them on your own looms.

THERE'S REAL ECONOMY IN STANDARDIZING  
ON BOND TEXTILE LEATHERS!

Bondaron, Bondural and Bondex Leather Products—

|                |                  |                      |
|----------------|------------------|----------------------|
| Check Straps   | Flat Belting     | Oak Tan Slabs        |
| Lug Straps     | Spinner Belting  | Lace Leather         |
| Harness Straps | Twister Cots     | Valve Leather        |
| Picker Straps  | Condenser Aprons | Back Straightenings  |
| Spindle Straps | Worsted Aprons   | Filleting Leather    |
| Shuttle Straps | Bunters          | English Sheep Skins  |
| Loom Pickers   | Picker Leathers  | Persian Sheep Skins  |
| Cone Belts     | Apron Leathers   | English Roller Bends |
| Round Belting  | Belting Butts    | English Calf Skins   |

write for Booklet 202

CHARLES

# Bond

COMPANY

617-623 ARCH STREET PHILADELPHIA, PA.

Manufacturers of Textile Leathers  
for Nearly Half a Century



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# Stuffed Shirts



**S**HIRTS not by the box . . . by the *bale*. And not only shirts but sox, underwear, blankets, etc. get compressed into bales that reduce their bulk  $\frac{2}{3}$  to save vital cargo space.

In producing these textiles, mills are reducing down time for repairs and replacements, by lubricating with Texaco.

*Texaco Stazon*, for example, assures efficient lubrication with minimum spoilage of yarn or fabric due to oil stain. It stays on fast-moving cranks,

etc., withstanding load shocks without splattering, creeping, dripping. Its high stability assures free operating bearings with lower power consumption.

For loom cams, use *Texaco No. 919 Lubricant S*.

Texaco Lubrication Engineering Service is available to you through more than 2300 Texaco distributing points in the 48 States. Call today. The Texas Company, 135 East 42nd Street, New York 17, N. Y.

## THEY PREFER TEXACO

- ★ More buses, more bus lines and more bus-miles are lubricated with Texaco than with any other brand.
- ★ More stationary Diesel horsepower in the U. S. is lubricated with Texaco than with any other brand.
- ★ More Diesel horsepower on streamlined trains in the U. S. is lubricated with Texaco than with all other brands combined.
- ★ More locomotives and railroad cars in the U. S. are lubricated with Texaco than with any other brand.
- ★ More revenue airline miles in the U. S. are flown with Texaco than with any other brand.



## TEXACO Lubricants

FOR THE TEXTILE INDUSTRY

TUNE IN FRED ALLEN EVERY SUNDAY NIGHT—CBS ★ HELP WIN THE WAR BY RETURNING EMPTY DRUMS PROMPTLY